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THROUGH THE UNKNOWN PAMIRS

(VAKHAN AND GARAN)

BY O. OLUFSEN

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THE SECOND DANISH PAMIR EXPEDITION

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THROUGH THE UNKNOWN PAMIRS

THROUGH THE UNKNOWN PAMIRS

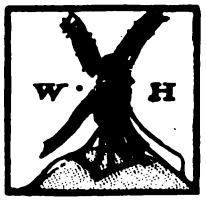
THE SECOND DANISH PAMIR EXPEDITION

1898–99

By O. OLUFSEN

LIEUTENANT OF THE DANISH ARMY
AND CHIEF OF THE EXPEDITIONS

WITH MAPS AND NUMEROUS ILLUSTRATIONS



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PRINCETON

PREFACE

THE First and Second Danish Expeditions to Pamir, whereof this book is one of the results, were undertaken at my initiative and under my guidance during the years 1896–97 and 1898–99, the object of both journeys being the exploration of South Pamir from the territory round the river Gund, the lake of Yashilkul and Alitshur Pamir, to the Hindu Kush.

THE FIRST DANISH PAMIR EXPEDITION, which I was able to perform through the goodwill of some private gentlemen,* lasted from March 25, 1896, to March 1, 1897. We went from Copenhagen through St. Petersburg, Moscow, Vladikaukas and Tiflis to Baku; thence by steamer across the Caspian to Usun Ada, at that time the starting-point of the Transcaspian Railway, and so by rail by way of Merv and Bokhara to Samarkand. Thence the journey was continued by carriage ("tarantas") through Tashkent, Khodjend, Kokand and Margelan to Osh in Ferghana. At Osh I equipped a small expedition with people, saddle-horses, beasts of burden, tents and stores, which in June started from Ferghana to Pamir, and returned to Osh in September. The strength of the expedition was from seven to fourteen men, partly hired Sarts from

* Count Lerche-Lerchenborg and Director H. Krag, Nestved.

Ferghana, partly Kirghiz from High Pamir and native mountain Tadjiks from those inhabited valleys of Pamir through which we were to pass. The Sart Hamrakul was my interpreter in the Tadjik tongue; I spoke to him in Ottoman Turkish, by help of which the Turkish dialect of the Sarts is quite easily learnt.

The expedition into Pamir went from Osh through the Alai mountains, the pass of Taldyk, the Alai steppe, and the lake of Karakul to the Russian fort, Pamirsky Post, by the river Murghab, whence the adventure was continued by the lakes of Yashilkul, Bulunkul, and the pass of Khargosh, to Vakhan. We worked through Vakhan, Ishkashim, Garan, Shugnan, Roshan, to Kalai Wamar; thence across the glacier-clad pass of Guskom, the river Yashgulam, and the glaciers in the Wandsh mountains to Kalai Wandsh. From Kalai Wandsh we moved along the Pandsh to the town of Kalai Khumb; thence across the pass of Sagridasht to Tevil-darra and Chil-darra, and through the pass of Kamtshirak, to Garm in Karategin. From Garm we went through Karategin and the Alai steppe back to Osh, through the pass of Taldyk. At Kalai Khumb I was met by the Bokhara Beg, Mirza Abdul Kader, who was sent thither to meet me by the Emir of Bokhara, and accompanied me on the Second Danish Pamir Expedition in 1898–99. During the rest of the time through which the expedition lasted we made longer stays, especially at Samarkand, at Bokhara as the guests of the Emir, and at Merv.

It is evident, from the great distance covered during so short a time, that this first expedition must be looked upon as a reconnoitring adventure which was to precede the more elaborate journeyings which are the subject of this book. I found very great difficulties in passing through

LIEUTENANT O. OLUFSEN

Vakhan, and more so in passing through Garan, where we had to pass over innumerable mountain spurs that thrust themselves down to the Pandsh river, for the water of the river was so high that we could not get along the banks, and the glaciers of the Roshan and the Vandsh mountains were very difficult to pass, as we had no assistance but what could be procured at the place itself. In Karategin and at the Alai steppe the expedition had constant downpours of rain and snowstorms to fight against during the whole month of September, so that it was only with the very greatest difficulty that we succeeded in crossing the Alai mountains on our way back to Ferghana.

The results of this first journey, amongst others the first map of Vakhan and Garan, were published in the periodical journal of the Royal Danish Geographical Society for 1897. A collection of ethnographical specimens was brought home to the National Museum at Copenhagen—these were bought partly by the museum itself and partly by a merchant in Nestved, Director Krag, to this end.

THE SECOND DANISH PAMIR EXPEDITION, amongst the members of which were the natural philosopher Anthon Hjuler, Assistant Master of the High School at Randers, and the botanist Ove Paulsen, M.A., I led from Copenhagen on March 23, 1898, bringing it back at the end of November 1899.

The means for the undertaking of this expedition, the object of which was a thorough examination of South Pamir, especially Vakhan and Garan, were granted by the Danish Parliament and the Carlsberg Fund—the Danish Consul, A. Nissen, at Rostoff, Don, and the Danish merchant Paul Mörck in St. Petersburg also contributed to it; whilst Paul Mörck also gave a considerable sum towards the

purchase of ethnographical specimens for the National Museum at Copenhagen.

This second expedition took the same route as the first, by way of Russia to Osh in Ferghana, where we arrived on May 28, 1898. We took with us almost our entire equipment from Denmark, in all some 6000 Danish pounds. All instruments and fragile articles were packed into big boxes ready to be hung balanced two and two across the pack-saddles of the beasts of burden; and the rest of the things were packed either in wooden boxes or wrapped up in felt for transport on horseback.

Of the articles we brought from Denmark, there were: An astronomical reflecting circle, artificial mercury horizon, chronometer, theodolite, apparatus for measurement of base-lines, Bousole's compasses, mercury barometer with reserve tube, aneroid barometers, hypsometer, pedometers, apparatus for measuring the electrical tension of the air, automatic sounding machine for the measurement of the depths of lakes and for the hauling up of samples from the bottom, phonograph with appurtenances, cameras with all requisites for photography (2000 plates, Edwards films), minimum thermometers, winding thermometers, other spirit thermometers, earth thermometers with Lamont's box, dew-point meters, rain meter, snow meter, 22 magazine guns and revolvers, 9000 cartridges, hunting rifles and daggers, powder for hunting, game-bags, bugles, a transportable canvas boat to hold five men (constructed by Commander Bonnesen and made at the Royal dockyard), 2 large double tents with reserve lines and cords, 12 large boxes to be hung balanced two and two across the pack-saddles of the horses, provided with spirit containers and articles for botanical and zoological preparations, 2 well-fitted

LIEUTENANT OLUFSEN IN HIS WINTER COSTUME IN PAMIR

boxes of medicines, fishing nets and hooks, specially constructed lantern with reserve glasses, 1500 candles, tool chest, horse shoes and nails, mosquito nets and mosquito helmets, a transportable kitchen-range with an oven, preserved food (amongst which were pemmican, meat-chocolate and vegetables), coffee, biscuits, articles for eating, materials for bartering, &c., flags and pennants, writing materials, library.

The large boxes were stowed with tow, which was later on employed for the cleaning of guns and so on.

All other things necessary for the expedition were bought at Osh—horses, pack-saddles, horse-trappings, felt rugs, cords and leather, fur cloaks and bedding, dried bread for the summer, as the range was not put up until we arrived at the winter station, rice, flour, salt, spices, tea, copper kettles and jugs for the cooking of the food for our native servants, and so on. Cattle we could get from the Kírghiz nomads on the way; and where the distance between the tribes was too great, the expedition brought live stock along with them. Through the kindness of the Russian authorities, we were allowed to buy victuals at the small Russian fort, Pamirsky Post, at the river Murghab.

On June 15 the expedition started with 14 men and 30 horses from Osh, taking the same route as the first expedition in 1896. After several examinations on the way in desert Pamir and in steppe Pamir, we camped at the lake of Yashilkul on July 19. The time from July 19 to September 4 was passed in exploring the lakes of Yashilkul, Bulunkul, Tuskul, Gaskul, and the lakes south of the Khargosh pass, and here the number of the expedition was augmented by 8 Kirghiz, so that it now consisted of 22 men. During our stay here a depôt was erected for the winter in the village of Khorok, where the river Gund flows into the Pandsh, in

Shugnan, where was a post of Cossacks of 100 men under the command of Captain-Lieutenant Kivekaes. Here all was brought that we had no need of during the summer; and Kirghiz caravans which we sent towards the north to Turkestan provided this depôt by degrees with the necessary victuals for the winter, which we reckoned would last from about November 1 to May 1, during which period we might reckon on being snowed up. We had first intended to make Ishkashim our winter station; but the people there had a lepra-like illness, and there were also disturbances on the Afghan side of the Pandsh river, so we altered our plans and chose Khorok for our winter station.

From September 7 to October 25 we stayed in Vakhan and Garan, where the expedition could often only advance by the aid of porters whose number amounted to 83 men, owing to the difficulties of the passage.

When great snowfall indicated that winter was going to set in, we arranged our winter station at a large house in Khorok, which one of the natives gave up to us. We built tables, arranged our observatory, and fitted up the houses with windows, clay fireplaces, kitchen-range, rugs, and primitive furniture which we made ourselves, and we put the station in a state of defence. It was very difficult to get hay for the horses or firewood, which we had to pay the natives to drag up to the station from a place about 30 miles distant.

We passed the time at our winter quarters from October 25 to March 1 in meteorological, botanical, zoological, linguistical, ethnographical and anthropological examinations of the materials collected, and barred up by snow as we were, we only made one excursion towards the north to Kalai Wamar in the month of December.

During our stay in Vakhan and Garan and at the winter station, the Bokhara Beg, Mirza Abdul Kader, served us as interpreter in the Tadjik language spoken here. This was arranged so by order of his Highness the Emir of Bokhara,

OUR ATTACHÉ AND INTERPRETER, MIRZA ABDUL KADER BEG
Who accompanied the First and Second Danish Pamir Expeditions by order of the Emir of Bokhara

Saït Abdul Akhad, who showed much goodwill towards both expeditions. Mr. Paulsen and I spoke the language of the Uzbegs to Mirza Abdul Kader, and Mr. Hjuler spoke to him in Persian. He was a highly cultured and amiable Mussulman, and very discreet, so he was good company both in our working and our leisure hours.

The details of ethnographic interest which appear in this

book have been gathered partly by autopsy and partly by questioning the most intelligent natives, such as Kasis (judges) and Aksakals (superintendents of towns). Much information I got from a Kasi from the town of Rang, in the province of Ishkashim, called Khoda Dâ, who stayed with us at the winter station at Khorok for this purpose. The Kasi was a native of Vakhan, had studied at the Medressé in Badakshan, was Kasi of Afghanistan, where he had met the Siaposh in Kafiristan, and had now settled down on Bokharan territory (Vakhan, Garan, Shugnan, &c.) where he had got the appointment of Kasi in the village of Rang.

When, in spring, the passage became clear to the south, the expedition started on March 1 to return along the same road by which it had come through Garan, Vakhan, Alitshur, Pamir and the Alai steppe, to Osh in Ferghana, where we arrived on April 3. We had terrible masses of snow and snowstorms to contend against, especially in Garan, Alitshur Pamir, and the Alai steppe, so that we were here obliged to change our pack-horses for yak-oxen ; and the cold, sometimes accompanied by strong gales, the thermometer going down to 30 degrees below zero Centigrade, was felt most disagreeably in the tents pitched on these desolate snow-fields.

From April 3 to June 17 we stayed in the towns of Osh, Margelan, Kokand, Samarkand, Bokhara and Merv, where ethnographical and archæological studies were pursued, botanical examinations made, and ethnographical specimens bought for the National Museum at Copenhagen. A longer stay was made at Bokhara, where we were the guests of the Emir.

For ethnographical, archæological and botanical purposes we made an excursion in boats down the Amu Darya

from Chardjui to Khiva, from June 18 to August 31. We lived for some time as guests of the Khan, Saït Mahommad Rahim Bahadur Khan, in the town of Khiva; then journeys were performed to Urgendsh, Khodjeli, Kona-Urgendsh, Hanki, and Hazarasp. Hence we went to Baku, whilst the main baggage of the expedition was sent to the port of Petrowsk on the Caspian. From Baku we went on horseback with a small caravan through Enseli and Kasvin to Teheran in Persia. We stayed in Persia from September 10 to October 10, and thence took the route home by way of Baku, Petrowsk, Moscow, St. Petersburg and Finland to Copenhagen, where we arrived on November 22, 1899.

The great interest shown in our adventure by his Majesty the Emperor Nicholas and her Majesty the Empress Dagmar resulted in the expedition travelling free of cost, man and baggage, on all Russian railways, whilst everything was brought into Russia free of duty. And I here desire to take the opportunity of thanking the Russian authorities for all their goodwill, which helped us much to the fulfilment of our aims; and on behalf of my travelling companions and myself I thank all the Danish institutions and private gentlemen who have supported us and shown interest in our endeavours.

As results of the expeditions, there have been published, at the expense of the Church and School Department and of the Carlsberg Fund, the following treatises by me: "The Second Danish Pamir Expedition," "Meteorological Observations from Pamir, 1898–99," 1903. Before the end of the year will be published "Old and New Architecture in Khiva, Bokhara, and Turkestan," with twenty-seven large plates and designs by me, whilst there will appear "Measurements of the Electric Tension of the Air in Pamir," 1903,

by A. Hjuler, a member of the expedition; "The Old Iranian Languages in Vakhan and Garan," by Professor Vilhelm Thomsen and A. Hjuler, and it is expected that in 1904 will be published "The Vegetation of Pamir," by O. Paulsen, M.A., a member of the expedition, together with a working of the mineralogical collections of the expedition by A. Wöhlk, M.A.

Besides these, I have published the following treatises in the periodical journal of the Royal Danish Geographical Society for 1897, 1899, 1900, 1901, 1902, 1903: "The First Danish Pamir Expedition," with a map of Vakhan and Garan; "The Winter Station of the Second Danish Pamir Expedition"; "The Journey of the Expedition on the Amu Darya to Khiva," with a map; "The Journey of the Expedition from the Caspian to Teheran in Persia," with a sketch and a map; "The Journey of the Expedition in Garan," with map; "The Works of the Expedition at the Lake of Yashilkul in High Pamir," with map and profiles of the lake, &c.; "The Summer in Central Asia"; "The Mosques of Central Asia; "Medressés and their Clergy"; "Mahometan Sepulchral Monuments in Pamir, Turkestan, Bokhara and Khiva," i. and ii.

All photographs are taken by the author.

O. OLUFSEN.

COPENHAGEN,
September 1903.

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CHAPTER I

Geographical description of Vakhan and Garan—The Pandsh valley—The river Pandsh—Its sources and tributaries—The Hindu Kush range—The Badakhshan range—The southern border mountains of Pamir—Garan, its holy fountains and altars, passages, pass-roads, paths, bridges, and ferries—Hot springs and geysers, earthquakes, metals, and minerals

WHEN a man comes down from the north through desolate Pamir, moving across its poor infertile high steppes, the once rugged outlines of its gigantic clumsy mountains flattened out to mighty smoothnesses, worn down by vast ages of the fierce sun's heat, ground away by long æons of the frost's blasting bite, and by the rude assault of centuries of wind and rain, he reaches the swift-flowing waters of the river Pamir Darya. If he pass along the banks of the Pamir Darya where it rushes through its stony bed, its western mountainous bank rising in steeps of conglomerate and gneiss and granite and slate on his right, its high eastern bank springing upwards on his left to the plateau of the Vakhan mountains which stretch from Pamir Darya to the Vakhan Darya, he will strike the Khargosh river where it flows into Pamir Darya at Mazar Tepé (*The Grave Mound*). Gazing from Mazar Tepé he will see, arising in the distant prospect, high imposing pointed black peaks that project like the steeples

of buried cathedrals from amongst the perpetual snow and blue-green glaciers that flash in the eternal sunshine of this high world. Their outlines are in sharp contrast to the mountains of Pamir; and at once he knows that these peaks do not belong to the range of the Pamirs, and that he will thenceforth move through a mighty change

THE RIVER PAMIR DARYA AND THE VAKHAN MOUNTAINS

of scenery as he makes his way through these, the most majestic mountains of Central Asia.

Mazar Tepé is below the treeless limit; and on the banks of Pamir Darya small willows and tamarisks now appear; and as he moves along the river towards the south, willow and tamarisk grow larger and larger, forming small copses along its course through its narrow ravines, as at Yol-mazar (*The Wayside Grave*) and adorning the banks of the Kizil Kreshim, a small tributary stream that flows into Pamir Darya from the west.

To the south of Kizil Kreshim wild roses abound in gay profusion, and here and there along the valley spring slim poplars.

At Djangalyk, *the Place covered with Copse*, as the Kirghizian tongue calls it, about twenty-five kilometres from the point where the waters of Pamir Darya pour themselves into the Pandsh river, he will see the first human habitation, a small house with flat roof that is the home of a few Vakhans.

The growth of trees has become more and more luxuriant, and the imposing jagged range of glaciers which shut out man's vision to the south forms a majestic screen to his gaze, as he looks down on the great ice-fields that stretch blue-green and deathly cold amongst the ruins of the weather-beaten mountain crests.

But he must move forward to Zir-i-Zamin, the Iranian word for *Under the Ground*, a small mountain stream which runs through a deep and narrow cleft to flow into the waters of Pamir Darya, before there bursts upon his vision the lovely deep valley with its flat-roofed houses built close together and surrounded by gardens, fields, and thick copse, along the banks of the arms of the river, and up the mountain terraces. He is now only ten kilometres from Vakhan. He is in the province of Vakhan, and before him he sees the majestic range of mountains known as the Hindu Kush. The river Pandsh that flows below through the valley is the main source of the Oxus or Amu Darya. That river is of unusual importance, for it is the boundary between the troops of Russia and the fierce hordes of Afghanistan.

In the following pages I shall treat wholly of this part of Vakhan and of the provinces along the Pandsh, Ishkashim and Garan, all lying in Russian territory.

Journeying through Pamir in 1896, I had passed through Vakhan during the summer time, on the way from Langar-

kish along the Pandsh to Khorok, moving northwards to Shugnan, Roshan, Darvas, and Karategin ; and in 1898–99, in command of the second Danish Pamir Expedition that is the subject of this book, I passed the time from September to March in the Pandsh valley between Langarkish and Khorok, wintering from October 26, 1898, to the first day of March 1899 in the village of Khorok, which lies at the junction of the rivers Gund and Pandsh. After several excursions in various directions, the expedition started out from Khorok on the first of March, and passed through Garan and Vakhan on its way to Turkestan, as all other roads are barred by deep snow at this time of the year. It may seem strange that, during our long stay in the upper Pandsh valley we did not once set foot on the Afghan side of this river Pandsh, which, in order to give a full and satisfactory account of the country, would of course have been both desirable and advantageous to the expedition ; but owing to the request of the British authorities the Danish Government had forbidden me to allow any member of the expedition to intrude on any but absolutely Russian territory.

The upper valley of the Pandsh is remarkable chiefly in that it is watered by the river Pandsh (Pandsh being Persian for *Five*) which is the main source of the historic waters of the Amu Darya (Amu being Turkish for *River*, and Darya the Persian for *River*) or Oxus ; and in that it forms the boundary between the most majestic mountains of the world—Pamir (or Bâm-i-dunya, the splendid Persian name for *The Roof of the World*) on the one hand, and the Hindu Kush on the other.

It is also remarkable in having a resident agricultural people at so very high an altitude. The people of these

distant mountains, cut off from the rest of the world, are little influenced by civilization ; indeed, we have but very meagre evidence as to their past history. The details given by the famous Venetian, Marco Polo, and the Englishman, Wood, are of the slightest. In 1837–38 Wood passed the southern side of the river Pandsh on his way by Sebak to Badakhshan ; and Marco Polo also, most probably, chose the southern bank for his journey in 1262–73, this being the best route, as the northern bank offers serious difficulties to traffic in several places, and even in the summer of 1896 was said to be impassable in those places.

The main source of the Oxus or Amu Darya embraces Pamir like a mighty eagle's claw clutching its spoil. By Hara Berezaiti, or *The High Mountain*, the Iranian myths possibly mean Pamir, whence flows the Ardvisura (or Oxus), about which, according to the Iranian myths, was the garden of our first parents—Airyana vaeja, in Avesta.

The Oxus receives its waters entirely from the glaciers and the perpetual snow of Pamir, and especially from the snow which falls here in winter and drifts in the valleys. When the Oxus (Amu Darya) leaves the mountains, south of Samarkand, it receives the waters of no more tributary streams on its long course through deserts and steppes to the lake of Aral.

The two main sources of Amu Darya (Oxus) are the Kizilsu Surkhab, or Wakhs, and the Pandsh.

The Kizilsu Surkhab (Kizilsu being Turkish for *Red Water*, and Surkhab the Persian for *Red Water*) has its source near the pass of Ton Murun in Transalai, and, with its broad fertile valley, forms the boundary between the Alai mountains and Transalai, the most northerly range of Pamir.

The Pandsh river receives on its right bank the large tributary streams of Murghab and Gund. The upper course of the Murghab—from the Persian Murgh, a *bird*, and Âb, *water*—is called Aksu, from the Turkish Ak, *white*, and Su, *water*, its source being about twelve kilometres to the north-west of the lake of Chakmaktinkul (37° 13′ latitude N., and about 74° 10′ longitude East, Greenwich, 4023 metres above the sea-level). The Kirghiz call the lightning Chakmak; a gun they call Chakmak-miltyk; and their apparatus for striking fire is called Chakmak. It is possible that flint is found by this lake of Chakmaktinkul, and that the name may arise therefrom in relation to the striking of fire from flint. But the word Chakmak means also, in the Kirghiz language, to sting, and this is perhaps the more natural explanation of the word, as there are great numbers of gnats and large poisonous flies at most of the alpine lakes of Pamir. The river Gund comes down from the so-called "Large Pamir," and flows through the lake of Yashilkul, the Turkish name for *Yellow Lake*, 3910 metres above the sea-level as measured by me in 1898. The Gund has a tributary stream, the Shakhdarra, Persian for *the Horn River*, which has its beginnings near the Mas pass, 4610 metres above the sea.

The river Pandsh, the real source of the Oxus or Amu Darya, was known to the old Arabian geographers. The name is said to be derived from its five main streams. If we look at the newest Russian ordnance maps of this region, it will be seen that we ought to consider as the source of the Pandsh river the small mountain brook called Burgut, Kirghiz for *eagle*, which has its beginning about fifteen kilometres north-west of lake Chakmaktinkul. From the south the Burgut receives from the Hindu Kush the tributary waters of the Bakdjir, Bai-kara, and Âb-i-Shorshil. The

Bakdjir comes down from the glaciers straight from the pass of Bakdjir, about 37° 2′ latitude N. and 74° 30′ longitude East, Greenwich. The Bai-kara and Âb-i-Shorshil have their beginnings west of the pass of Boroghil. The Pandsh, which is here called Vakhan Darya, after having received the waters of the Bai-kara, now receives from the north, at the village of Langarkish, the tributary river Pamir Darya which has its sources partly in some small lakes, 4298 metres above the sea-level, situate east of the large alpine lake Sorkul (4145 metres above the sea), and partly in the so-called Vakhan mountains that lie between the Pamir Darya and the Vakhan Darya. This Vakhan Darya portion of the Pandsh flows through Sorkul, several small streams from both banks pouring their waters into its swift flood, and, rushing with rapid flow through the barren highlands, empties itself into the Pandsh, forming near its outlet into the greater stream several arms of water bordered by copse.

If we consider, then, the rivers Burgut, Bakdjir, Bai-kara, Âb-i-Shorshil, and Pamir Darya, as the main sources of the river Pandsh, their number—five—entitles the Pandsh to its name of *The Five Rivers*. They all have their beginnings at a majestic height of some 4600 metres above the sea; and the Burgut, leaping and rushing down from the mountains of Vakhan, the source of the historic Amu Darya, or Oxus, is fitly entitled *The Eagle*, being the origin of this world-famed river, along the banks of which have been fought for centuries the fierce battles of Iranian and Greek, Arab and Turk, and Mongol and the Slav peoples.

We have seen, then, that the Amu Darya, or Oxus, has its sources in the glaciers, about 75° longitude East of Greenwich, where the mighty ice-clad mountains of Mustagh ("*ice*

mountains") and Hindu Kush meet; and its main sources, Burgut and Aksu, lie at a distance of only some four kilometres from each other on the same mountain ridge of the Vakhan.

The fall of the river Pandsh, reckoned from the source of the Burgut to Sarhad, is 1247 metres in 75 kilometres; from Langarkish to Rang is 327 metres in 100 kilometres; and from Rang to Khorok is 702 metres in about 100 kilometres.

The Pamir Darya has, from its source to the lake of Sorkul, a fall of 153 metres in 20 kilometres; from lake Sorkul to Mazar Tepé. where the river Khargosh flows into it, a fall of 285 metres in 40 kilometres; and from Mazar Tepé to Langarkish, where it empties itself into the Pandsh, the Pamir Darya has a fall of 831 metres in 60 kilometres.

It will thus be seen that the Pandsh has a very rapid current until it reaches Sarhad; from Sarhad the river slackens pace considerably through the whole of Vakhan; whence, turning northwards through Ishkashim and Garan, its waters again gain speed and move swiftly forward.

The Pamir Darya has its greatest fall in its lower course; and both the Pamir Darya and the Pandsh convey large quantities of stone and detritus from the broken-up rocks into the Vakhan valley. As the Pamir Darya flows into the Pandsh at Langarkish, the meeting of their waters has caused the deposit of much of its suspended matter, and the valley is filled up in great part with a smooth layer of water-borne gravel and pebbles, so that the banks resemble a beach, and are almost wholly devoid of vegetation.

Between Semut and Shirtar the Pandsh loses its speed, and its sluggish flood presents a lake-like appearance; the swift stream, losing its force, is no longer able to carry its suspended matter and deposits masses of fine sand, for the

COPSE IN THE BED OF THE RIVER PANDSH NEAR LANGARKISH IN VAKHAN

(HIPPOPHAË, SALIX, TAMARISK)

greater part consisting of arcuaceous quartz, with admixture of large amounts of felspar, augite, magnetite, biotite, hornblende, and muscovite—sand which, at low water during the summer, dries up, and, caught by the strong westerly winds which are always blowing in Vakhan, is borne all over the valley, spoiling and ruining the tilled fields. In several places are large tracts of this devastating sand which drifts into sand-dunes amongst which the tamarisk grows—the only plant which seems to be able to thrive here, and which ought to be planted in greater numbers in order to bind the sand drift which often causes such blinding sand-storms that one can with difficulty see one's hand before one's face.

In the comparatively wider valleys at Langarkish and Zunk, the Vakhan Darya, like the Pamir Darya, divides into a great many arms which, however, unlike those of the Pamir Darya, are boggy and muddy, and convey a blackish water that looks like sewage water. The banks are overgrown with impenetrable copse of Hippophaë thorny bush, willows, and poplars, amongst which live small wild boar. Unlike Pamir Darya, Vakhan Darya conveys a fertilising mud. Between Langarkish and Ptuk, the waters of the Pandsh retain this miry appearance, and the banks are covered with grass and are fertile; but west of Ptuk, especially in the broad valley between Semut and Shirtar, the banks are sandy and barren. The mire conveyed by the Vakhan Darya is not deposited further than the neighbourhood of Ptuk. From Ptuk a number of rapid tributaries from the Hindu Kush glaciers pour their swift streams into the river, carrying in their flood immense quantities of gravel and pebbles, flinging them down in the Vakhan valley between Ptuk and Shirtar, and forming enormous barren

terraces about the junction of the tributaries with the river. Thus it is possible that the drift sand of Central Vakhan comes down from the moraines of the Hindu Kush.

The mountains at Langarkish and Zunk recede considerably on either side from the river, and thus give room for a broad valley. But they come together immediately west of Kalai Pandsh, and form a small ravine through which the Pandsh can just pass. Again the valley widens out to a breadth of several kilometres, and the river divides into arms dotted with little islands covered with thorny copse. After this lake-like extension, the river, from the village of Shirtar onwards, only consists of one arm, which here and there widens out and gives room for little islands.

From Darshai to Nut, the river in several places narrows some twenty to thirty metres; it has often here a great fall, and causes a resounding uproar which can be heard all over the valley as it rushes through its rocky bed in the deep ravine that it has cut out for itself by erosion. The banks are here almost devoid of all vegetation, and the presence of the river, though often invisible within its steep banks, is betrayed by its constant roar, which booms with a hollow sound, as though from underground.

From Darshai to Si-khanah, the Persian phrase for *Three Houses*, the mountains run so close together, north and south, that in most places there is only room for the actual bed of the river; it is only near the outlets of the small brooks that a few hundred square yards of arable soil are to be found.

About three kilometres west of Si-khana the river leaps into considerable cataracts; whilst immediately south of Rang the checked rush of its flood flings down the sand again into devastating sand-dunes.

From Nut to Somdjen, in the province of Ishkashim, the valley of the Pandsh becomes broader. The river also divides into several arms which embrace islands covered with thicket, willow abounding. The banks are covered with thick copses, the haunt of the wild boar. A few kilometres north of Somdjen, in the province of Garan, the valley of the Pandsh narrows again into a mere cleft in the mountains, and the river retains this form until it receives the waters of the Gund at Khorok. After leaving Ishkashim the waters of the Pandsh rush at Darband, the *Door Fastening*, at the boundary between Garan and Ishkashim, leaping thither in a number of cataracts; indeed the river forms here, in a narrow mountain pass, a rather imposing waterfall. From Darband almost to Khorok the stream of the Pandsh rushing down over its rocky bed is like one vast foaming cataract crushing everything that falls into its swirling eddies, as its waters dash against the mountain sides. Here, in Garan, its raging waters make

THE RIVER PANDSH IN ISHKASHIM. IN THE BACKGROUND THE HINDU KUSH

such a tumult that it is impossible to hear any other sound when standing near its banks; and even at a distance of a few steps the report of a rifle cannot be distinguished.

THE HINDU KUSH

The Hindu Kush consists of a range of mountains of granite, gneiss, and slate—huge masses that are here and

VIEW ACROSS THE VAKHAN VALLEY TOWARDS THE HINDU KUSH, FROM THE VILLAGE OF DRAIS

there varied with lime. The Hindu Kush forms, at its eastern end, up to the meridian of Kalai Pandsh, for a distance of about 160 kilometres, the southern boundary of Pamir; and throughout all its length to the west it is the watershed between the tributary streams of the Amu Darya (Oxus) to the one side, and of the tributary streams of the Indus to the other. In Ishkashim, the Hindu Kush turns southwards, and from Ishkashim to the valley of the river Wardosh the pass of Sebak makes the boundary between Wardosh and the Badakhshan mountains which now form the northern boundary of the valley of the Pandsh up to Kalai Khumb in Darvas.

All the way from Langarkish to Ishkashim, the Hindu Kush resembles an immense majestic Alpine range; and this is especially so near Langarkish, owing to its wild rugged peaks. At Sirgyn and Dries, it stands out like a huge wall, the top only visible when we look straight up into the sky, and even then we see only its advanced foremost spurs. It springs straight and steep from the valley, and is inaccessible. Everywhere in Vakhan are seen in the ravines of the Hindu Kush, through which run the tributary streams, greenish blue glaciers and patches of snow lying in curves down into the valley. Seen from the valley, the Hindu Kush stands out still more lofty and majestic the further west we go into Vakhan, until we come near the village of Ishtragh—where the highest peaks recede so far into the south that they cannot be seen from the valley of the Vakhan; indeed, from this point only some large rounded hills are visible, sloping in smooth undulations towards the province of Ishkashim, where the valley widens out considerably towards the south—the territory between Sebak and Ishkashim being saddle-backed.

Here an easily accessible pass is found which forms the gate by which the peoples from round about Balk, the mountaineers from Kafiristan north of Kabul, and the people of India have easy access to the valleys of the Pamir, each from his own side.

Unlike the mountains of southern Pamir, the Hindu Kush all through the summer has snow and glaciers along the complete length of its ridge, and terrible snow-storms rage and whirl about these black ruin-like peaks. Throughout all this long distance from Mustagh to the Badakhshan mountains only two good passes are to be found. The pass of Boroghil lies towards the east, 3650 metres above the sea

which near Sarhad (3422 metres) leads from the valley of the Vakhan Darya to the river Yarkhun, towards south-west to Mastudsh, and across the Darkot pass to Yassin, Hunza, Nagar, and Gilghit. This pass can be traversed in about half a day, summer and winter alike. Snow of any importance its only found in the pass during March and April,

THE AFGHAN STRONGHOLD OF KALAI PANDSH. IN THE BACKGROUND THE HINDU KUSH

and rarely enough to prevent one from forcing a passage. From the pass of Boroghil to near Kalai Pandsh, the Hindu Kush forms one mighty insurmountable mountainous mass, the height of which exceeds 6000 metres, covered with glaciers and perpetual snow.

Almost in front of Kalai Pandsh we have the pass of Resh, or Rish, about 5100 metres above sea-level. This is a very difficult pass to traverse; the incline is exceedingly steep,

and the passage is in addition filled with fragments of rock. According to the natives, the pass is above the line of perpetual snow; yet an Indian testifies to having made his way through it in December, though, according to his account, he did so with great difficulty. Immediately west of the pass of Resh, facing the town of Drais, are some passes which lead to Chitral; these passes are the eastern passage, as high as 5600 metres above sea-level, and the western passage as high as 6700 metres above the sea. These passes can only be crossed, even by pedestrians, during a couple of months of the year, whilst the ascents are so steep that beasts of burden cannot be employed.

From these passes to the next pass on the west, the pass of Ishtragh, the Hindu Kush attains some of its greatest heights—the mountain of Lunkho rising to 6900 metres above the sea, and the heights of Ssad Istragh, immediately to the east of the pass of Istragh, thrusting itself 7350 metres into the heavens. The whole range is in these parts covered with glaciers and perpetual snow, of which we catch white glimpses from the valley of the Vakhan, and a larger vision from the village of Namatgut, which commands a view right into the pass of Istragh as far as the point at which the immense glacier pushes down into the valley.

Whilst spending September in Vakhan, we witnessed every day the splendid sight of the tremendous snowstorms that whirled and raged about these dark mountain peaks. The flying snow would wrap the mountains about to a height of some 4500 metres; the storm would pass, lifting like a veil, leaving the mountains white with snow, which in an hour would be blotted out by the sun's heat; then, in another hour a snowstorm would leave them white again.

Down in the valley, where we were, it was lovely summer weather all the while; and we enjoyed without danger or chill these grand and imposing spectacles of wild nature.

The pass of Istragh, which leads from the valley of the Pandsh to Chitral, is difficult of access. The ascents from Vakhan are very steep, and the paths run across stony river-beds filled with fragments of rock. According to the Vakhans this pass is quite impassable in the winter; and even in the summer it is necessary to ascend into the area of perpetual snow, which, however, is not always a very dangerous thing to do. It is my experience that the moraines of broken rocks are much more dangerous than the snow and ice, for they easily give way under a man when he steps upon them, and, once set moving, they start others, until they threaten to bury or overwhelm the whole caravan. I judge by the evidence of natives that the snow in the pass of Istragh during the summer is confined to a few small patches which, being sheltered from the heat of the sun, do not receive enough heat to melt them. The height of the pass I estimate to be about 5300 metres above sea-level.

West of the pass of Istragh, between the Arkari river and the valleys of Yarkhun, the highest peaks of the Hindu Kush spring upwards in two separate mountain giants—the northern peak, called Nushau, is 7460 metres high, its glaciers discernible from the town of Rang in Ishkashim—the southern peak, called Tirach-mir, reaches the great height of 7463 metres, and is one of the most magnificent and most imposing glacial formations of the world. (The calculations for the heights of these two splendid peaks are only trigonometrical measurements, and must be considered

as not too accurate, though they are probably pretty nearly correct.

Immediately west of the Nushau glaciers is the pass of Nuksan, 5064 metres above sea-level, which forms the watershed between the tributaries of the Wardosh river and the tributaries of the river Arkari. Nuksan is said to be a pass very difficult to traverse where the road ascends above the line of perpetual snow. According to the natives, however, it can be crossed during the greater part of the summer.

West of the pass of Nuksan, the Hindu Kush again attains a considerable height, and is covered with a less isolated glacier at 6500 metres height; but at about the meridian of Sebak the range becomes saddle-backed as we come to the Dora pass. The height of this pass has been given by several authorities, and with as many different results. It is, however, according to all these authorities, very easily accessible, and from natives who had traversed it I learnt the same fact. I therefore presume that 4260 metres, the lowest of the estimated heights, is the most correct one. Yet it is a pass that is much dreaded on account of raids by the rapacious Siaposh.

The passes of Boroghil to the east, and Dora to the west, are the easiest and most accessible passages across the Hindu Kush into India. At the pass of Dora the majesty of the Hindu Kush is at an end, and from this point its imposing greatness dwindles steadily.

THE MOUNTAINS OF BADAKHSHAN

From the pass of Sebak, towards the north, the Badakhshan range forms the western boundary of the valley of the Pandsh. At the latitude of Kalai-bar-Pandsh this range contains the mystical alpine lake of Shiva. For political

reasons, this lake has to this day escaped exploration by Europeans; for it has been impossible to obtain permission from the Afghans to visit it, though it would scarcely cause an upheaval either of Asia or Europe if we had made a chart of it. A few kilometres north of the gate of Sebak the Badakhshan mountains attain a height of some 5000 metres. All the way from the town of Somdjen to the outlet of the river Gund into the Pandsh, the mountains of Badakhshan stand like an immense wall down into the valley of the Pandsh, so that the river itself glides along their sides; and it is only where the small tributary streams flow into the river that the valley widens enough to give room for a few houses with their little fields about them.

From the neighbourhood of Somdjen to within five kilometres north of Shambedeh, the Badakhshan range is topped with a sharp crest of jagged peaks; and the range is here said to be wholly impassable owing to its steepness. No glaciers are here seen; but here and there are patches of snow in the dark ravines of the loftiest peaks. The range looks dark, forbidding, and gloomy, the bleak monotony of their huge massiveness relieved only by patches of snow and the cataracts of the small tributary streams.

Owing to the great steepness of the incline with which the mountains of Badakhshan descend to Garan, there are only in a few places what might be considered tolerably accessible passes from this province of Garan to Badakhshan. About five kilometres north of Shambedeh is a passage which runs alongside a small tributary stream to the valley of the river Sargilan, a tributary of the Wardosh, and this passage is continued to Faisabad in Badakhshan. Moreover a passage to the mystical lake of Shiva is found at the town of Badjan.

THE SOUTHERN BORDER MOUNTAINS OF PAMIR

If we now look at the northern boundary of the upper Pandsh valley, which is formed by the southern mountains of Pamir, we find that though they consist of the same rock as the Hindu Kush, they cannot compare with the Hindu Kush either in height or majesty or imposing grandeur. Real glaciers are not found upon them, though in their highest regions they are covered with perpetual snow.

Both the Vakhan mountains, which form the northern boundary of the valley of the Vakhan Darya, and the mountains of South Pamir between Pandsh and Shakhdarra, have heavy clumsy forms with flattened peaks, and are in fact more like plateaus which descend in terraces down to the river valleys to north and south. Both these ranges attain to a height of some 6000 metres above the sea-level. The mountains of southern Pamir reach their greatest height about the meridian of Kalai Pandsh ; in this place are high peaks which trigonometrical calculations showed to be about 7600 metres. Towards the west they decrease in height, and from about 72° longitude East of Greenwich, to the Pandsh river they do not anywhere seem to exceed 5000 metres above sea-level.

From Langarkish to Ishkashim, the southern Pamir range recedes northwards, and ends in a steep slope towards Vakhan. This slope is covered with broken slate and fragments of rock, which shows that the mountains consist chiefly of granite, gneiss, and slate. In a few places steep slopes of conglomerate run down into the valleys of the tributaries. When the last steep slope from Vakhan is passed, there are still some mighty terraces to pass before we can look down into the valley of the river Shakhdarra.

In Garan the mountains of southern Pamir descend steep and sheer to the Pandsh river like a wall, and are very difficult of ascent in consequence. The top is a plateau with rounded flat hills of slate which are easy enough to ascend once we have scaled the wall-like heights to the plateau. Only in a few places are easier passages to be found over the mountains of the southern Pamir from Vakhan to Shakhdarra; and these passes, which start from Jemtshim and Ptuk, are, according to the Vakhans, only passable by pedestrians; yet I think I can safely say that pedestrians can pass across the mountains from Vakhan to Shakhdarra almost everywhere. About half-way between Shirtar and Darshai there is a passage through a very narrow ravine along a small tributary stream. From this we went towards the north-west across a small snow-covered pass to the source of the river Garm-chashma Darya (*The Hot Spring River*), and so pushing along this river we reached the town of Andarab in Garan.

NARROW CLEFT IN THE MOUNTAINS NEAR THE VILLAGE OF DARSHAI IN VAKHAN

Owing to the steep incline of the mountains down to the Pandsh valley, the course of the tributary streams is necessarily very short. They should rather be termed brooks, which, with a very rapid current, rush down the terraces, generally through deep ravines or mountain clefts in their middle and lower courses. In several places, as at Langarkish, Zunk, Darshai, Barshar, and Garan-i-bala, these mountain streams form very beautiful little cataracts of a few hundred metres descent; yet their body of water is too insignificant to form imposing cascades.

Most of the tributary streams of the Pandsh river are found between Langarkish and Namatgut; and owing to the large glaciers in the Hindu Kush the streams which come from that range are the largest. Their length, however, rarely exceeds ten, and never exceeds 15 kilometres; but their body of water is so great during the early part of summer when the ice melts that they can only be crossed by artificial means. As a rule it is not the depth, which rarely in their lower course exceeds one to one and a quarter metres, which deters horsemen from crossing these streams, but their rapid current which, with foaming eddies, breaks to pieces everything that comes into the wild chaos of stones which fill up their beds. With the aid of the natives I had to construct innumerable little bridges across the Vakhan rivers in July and August 1896, in order to proceed with the caravan, for, strange to say, the inhabitants had not themselves performed this work for their own uses. Fortunately the material for the bridges was just at hand—some trunks of willow and poplar were placed across the river from boulder to boulder, and as a covering to these, flat pieces of slate were used, these being found in great quantities and sufficiently large for this purpose.

Across these rickety bridges the horses were then led, one by one.

On the way from Ishkashim to Khorok the tributary streams of the Pandsh diminish both in number and in size. Only a very few rivers come down from the Badakhshan mountains, and these are very small. The streams from the mountains of South Pamir are mere mountain brooks, containing just sufficient water to fertilise the little cornfields and gardens of the mountain terraces of Garan. The sole exception is the river Garm-chashma Darya, the longest tributary of the Pandsh in Vakhan and Garan, as it also contains the largest body of water. I charted this river during the autumn of 1898.

THE VALLEY OF THE RIVER GARM-CHASHMA DARYA

The source of the Garm-chashma Darya is about 15 kilometres south-east of Andarab, amongst some pointed peaks in the mountains of South Pamir ; from thence the river runs through a deep, narrow, dark ravine which is almost wholly devoid of vegetation down to the village of

Râtsh, passes some hot fountains, and continues its course through a partly wooded valley to Andarab.

The Garm-chashma Darya only receives three tributary streams from the imposing slope that rises to the north covered with juniper; from the undulating hilly ground to the south it receives no less than five small streams, the banks of which are covered with willow, poplar, and bushes interlaced with honeysuckle.

The village of Shund, situate near the banks of the river Garm-chashma Darya, at a height of 2566 metres above sea-level as measured by the hypsometer, shows the fall of Garm-chashma Darya from Shund to the outflow of its waters in the Pandsh to be about 200 metres in 11 kilometres. The hamlets, of but a few houses, are dotted about the mountain slopes near the little tributaries, idyllically situated in the wooded ravines, where the Garans take great care in the growing of corn high up on the mountain sides.

The kislak of Shâh Hindarah is situated so high up on a terrace in the mountains north of Garm-chashma Darya that the village can only be seen from the top of the southern mountain slope. This is often the case with the kislaks in all the mountain valleys of Pamir, more especially in Garan. When making one's way through the Pandsh valley, along the bank of the river, one would think that there was scarcely a village to be found in the region; and it was not until one reached the slopes higher up that they came into sight—stowed away as on shelves in the mountains, one above the other along the rivers. The native Garans told us that many of the inhabitants live up on these terraces without ever descending the mountains; partly, it would seem, owing to the difficulty in climbing up

and down the heights, and partly owing to their dread of meeting wicked people and spirits and demons outside their native place, which is all the world to them. One old man in the town of Shund, over a hundred years of age, had thus never been outside the valley of Garm-chashma Darya. Indeed, even the people who live on the principal rivers, which from time immemorial have been the chief thoroughfares for all communication in these regions, often only know the river to the distance of a few kilometres on either side of their kislak.

A fair riding path runs along the southern banks of Garm-chashma Darya to Râch through a valley which is shut in by such a narrow mountain gate towards the Pandsh valley that one would never dream of finding inhabited places in this place. Thence a path runs southwards across the mountains to Vakhan at the kislak of Darshai. A passage, very difficult of ascent, leads from Râch upwards almost to the source of the Garm-chashma Darya, and turns to the north-west to the Shakhdarra valley across some passes which are also very difficult of ascent.

From Kuh-i-lal in Garan a very rough path runs across the mountains by way of the kislak of Delâk to the Garm-chashma Darya valley. From Kuh-i-lal we moved in the autumn of 1898 towards the north-east, up a very steep and difficult ravine between two isolated peaks. The path runs all the way along a steep dried-up river-bed, where the horses are led with great difficulty from one terrace to another. The whole place is quite devoid of trees, but it is covered with very high grass which, during the early part of summer, affords good pasture for the cattle of the Garans The path turns due west at a point which, with the aid of a pedometer and the angle of the mountain's slope, I judged

to be about 1500 metres above the terrace of Kuh-i-lal, or about 4000 metres above sea-level. Here we arrived at a small uninhabited town with houses built of piled-up stones, and with flat roofs made of large pieces of slate. Each house consisted of various little rooms with fireplaces; and in the middle of the town was a square, fenced in by high stone walls, which formed a fold for the cattle. This was a so-called Ailâk, or summer village, where the Garans stay with their cattle during the time when the pastures are at their best, when they, like the people in Norway, take the cattle to the mountain pastures.

North of this Ailâk we passed a small mountain stream which, all the year through, conveys water to the Pandsh, and so along a path which has been worn by the natives using this route. This path winds west and south of some isolated peaks and the plateau-like grass-covered mountain terrace, and is continued in steep windings through the town of Delâk and along the idyllic ravine overgrown with thicket through which runs the tributary stream of Sijâw, down to the valley of Garm-chashma Darya. From the terrace there is a comparatively wide view towards the west across the Pandsh valley to the mountains on the Afghan side.

The mountains impress us in this region, as is generally the case in Pamir, by their imposing massiveness and heavy form, not by the height of their peaks and their sharp outline. Their character is that of gigantic terraced colossi, whereon the small villages are placed as on shelves, one above the other.

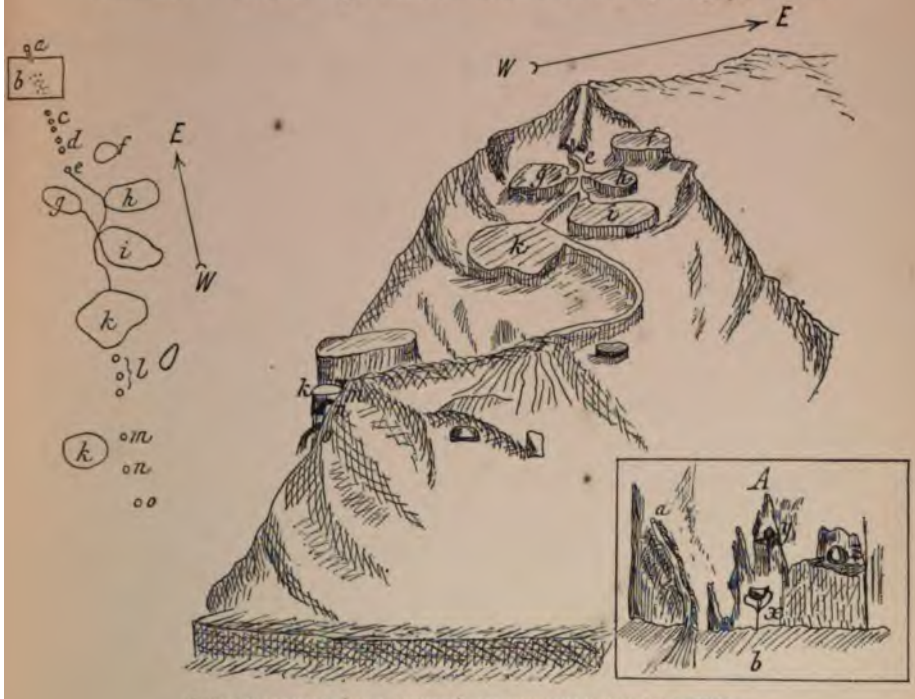
Besides the noteworthy fact that a rather considerable wood of tall willows and poplars, a rare sight in the Pamirs, is found in the valley round the middle course of Garm-

chashma Darya, the valley offers another feature worthy of note—hot geysers.

The hot geysers, situate about 350 metres west of the kislak of Shund, on the northern bank of the river Garm-chashma Darya, are a sanctuary to the Garans. The geysers are called Garm-chashma (*Hot Spring*), and their craters are situated along a sharp rocky ridge in a west and east direction, whilst the range which borders the valley, to the north of which this geyser-vomiting rocky ridge is a spur, runs West 35° North.

The geysers are in a line of ten large craters, and numbers of smaller ones. In most of them the water only bubbles up just above the opening, but several of the western ones fling up fountains, of which one at the top of the ridge shoots up a hot jet of water to a height of twelve centimetres, and another one, lower down the ridge, spurted out a jet of thirty centimetres horizontally from the rock. They all contain yellowish green sulphurous water. This water, on being tested in sample, showed that it contained the salts lithium, natrium, calium, calcium, and zinc. From the whole of this mountain ridge a vapour arises with a strong sulphurous stench; indeed, the ridge seems to be a deposit of the springs; on both sides of the crater-line, natural basins of deposits from the geysers have formed, the layers being built up round each other like a wasps' nest. These deposits are of limes mixed with sulphur. A few of the geysers had a crater of eight centimetres in diameter; and out of these openings issued small white balls, some of the size of little peas, but mostly quite tiny—these pea-stones were of a lime substance which forms in the eddy owing to the upward pressure of the hot water. The springs are situated about twenty-five metres above the

river Garm-chashma Darya, at a height of 2590 metres above sea-level. About 250 metres above these springs, on the



GARM-CHASHMA (HOT SPRING) AT THE VILLAGE OF SHUND

a. Crater (*ca*. 9 metres above plateau *b*) temp. 53° Centigr. *b*. Plateau with numerous little craters of the following temp.: 54.9; 55.0; 46.0; 55.5; 53.0; 45.3; 56.0; 53.0; 46.0; 55.0; 53.0. *c*. Complex of small craters of the following temp.: 39.0; 49.0; 52.0; 47.0. *d*. Complex of small craters of the following temp.: 31.5; 31.0; 45.5. *e*. Comp'ex of small craters of the following temp.: 58.2; 57.5; 58.8: 59.2. *f*. Empty basin. *g*. Basin with water of temp. 41.0. *h*. Basin with water of temp. 42.0. *i*. Basin with water of temp. 35.0. *k*. Basins with water of temp. 25.0. *l*. Craters of the following temp.: 37.0; 55.0; 58.0. *e*, *m*, *n* & *o*. Geysers, of temp. (*m*, *n* & *o*), 59.0. *A*. The altar in the rock. *x*. Copper lamp, *y*. Earthenware lamp. *z*. Round black stone.

northern slope of the valley itself, are several deposits of the same kind, which shows that in the past there were hot springs here also. (Temperature at the spring and in basins, see illustrations.)

On a terrace of the rock below the place at which the eastern uppermost fountain issues, a small yard has been fenced about with a wooden paling; this yard encloses a number of little fountains, which bubble out of small holes only large enough to allow the passage of an ordinary lead pencil. This is the sanctuary of the natives, as is indicated by a small primitive altar beside the uppermost fountain, which pours down on the fenced-in square. The altar consists only of some natural little caves in the rock beside the source—on shelves in these caves are placed a small copper lamp, a small earthenware lamp, and a round black stone; above the altar is a white banner on a staff, and on the top of the staff is a hand with distended fingers, made of sheet iron—this hand has certainly, as will be shown later on, a symbolic significance, as it is often found carved in rocks and stones in Vakhan. It was also found on a stone with inscriptions, which the expedition brought home to the National Museum at Copenhagen.

The earthenware lamp resembles the chirâks ordinarily used in Turkestan; the copper lamp, on the contrary, consists of a small bowl resting on a copper stand about 20 centimetres high, with twisted arms. We shall have cause to consider similar lamps from the sanctuary in Vakhan later on.

In the yard in front of the altar the natives say their prayers—kneeling down before the lamps, which are lit on special occasions, they cover their faces with their hands. It is the scene of great religious festivals, when cattle are killed on the rock, and the rich people divide the meat among their poorer neighbours.

The natives bathe in the sulphurous hot water in the basins which, according to their tradition, heals all ailments.

During our stay, naked children lay in the basins, splashing about in the water which was at a temperature of 42° Centigrade; and from the neighbouring valleys pilgrimages are made to the holy place. Red, grey, and green algæ grow round the spurs from the sides of the rocks, and with the sulphur-laden watery vapours lend a strangely fantastic look to the place. The grey algæ grew in hot water of 39° Centigrade; the red algæ in water of a somewhat lower temperature; and the green ones in water of a still lower warmth.

The passages in Vakhan and Garan are very much in the state in which Nature made them—except that the paths during the course of time have been trodden down by man and beast where the substratum does not consist of hard granite. From Langarkish to Khorok both banks of the river are passable for travellers; indeed, the paths chiefly run alongside the Pandsh river. On the southern and western banks of the river a tolerably good bridle-path is found from Kalai Pandsh to Kalai-bar-Pandsh. During the reign of Abdurrahman Khan this road has been greatly improved—at the most difficult ascents ramps were made, bridges were built across the tributaries of the Pandsh, and though primitive they are of great importance for traffic. On the slopes the paths were cut into or dug out of the mountain sides; and in many places the rocks and slate which had rolled down from the mountain ridges were cleared away. On the northern and eastern banks of the Pandsh, however, nothing whatever was done. When, in 1896, I passed the Russian garrison at the Pamirski post at Murghab on my way to Vakhan, the commander of the garrison imparted to me the disheartening news that I should only be able to move along the Pandsh on its southern bank; and as I had no permission to do so, and could

obtain none—indeed, I was even watched by Afghan mounted patrols all along the march to hinder my crossing the Pandsh—the Russian commandant was very nearly correct in his gloomy forecast, for it was only with great difficulty that I passed through Garan in the month of

THE RIVER PANDSH IN GARAN, LOOKING NORTH FROM SHAMBEDEH

August, with great loss in beasts of burden and almost by crawling on all fours.

The difficulties of the traveller in Vakhan and Garan are greatly dependent on the seasons. During the melting of the snows, which begins in May, all the rivers are considerably swollen, and the great depth of the Pandsh in flood lasts until the end of August. At this season the difficulties begin—about three kilometres west of Zunk we had to clamber over a small promontory which runs down almost to the river. From September to March the banks of the river are passable, so that this pass is avoided.

Thence there is at all seasons a good bridle-path almost to Ptuk. From Ptuk to Shirtar, where the Pandsh. in high flood and great volume of water widens out into a lake and overflows the whole valley, one must clamber painfully and toilsomely across one mountain spur after another—whereas, at low water, one can ride across the tracts of drift-sand deposited by the river.

From Shirtar to the cataracts west of Si-khanah, the path again winds up and down. The spurs of the mountains often come right down to the river, leaving no room for banks, so that one must now ascend some thousand metres to get over its ridge, now descend again across some small tributary stream. It is only at the mouths of the tributary streams, where there is room for cultivated fields, that one can ride for a few hundred metres on level ground.

From Si-khanah to Nut the passage is very accessible, and runs, partly across tilled fields, partly across sandy tracts, south-east of Rang. Only north-east of Rang there are a few passes to traverse. From Nut to Khorok the path runs the whole way close beside the steep mountain slope, high up or low down, just as it has pleased Nature to make the terraces broad enough for the caravan to pass them or not. From Nut to Somdjen one can move along the banks of the river at low water, from September to April; but for the rest of the year the valley is made impassable by the Pandsh dividing itself into a great number of arms winding through low thick copse on the banks.

From Somdjen to Barshar the path winds up and down the mountain slopes through a maze of huge fallen fragments of rock, amongst which it is difficult to pick one's way, and difficult to push on, as the space between the enormous blocks of granite is often so narrow that it is a pinch to pass through.

The burdens have every now and again to be removed from the animals; and both baggage and animal have almost to be carried step by step. These mazes culminate at the cataracts south of Barshar, where enormous fragments of rock, both from the east and west, have been hurled down into the valley, almost barring it. North of Khosedeh the path runs along the sides of enormous fallen masses of slate, which, being without any binding material to cement it, lies so loose that the path continually slides downwards as one passes along it.

The roughest part of the journey along the Pandsh is from Shambedeh, a small terrace covered with willow, poplar and apricot trees, to Mishus. Here Nature seems almost to have gone out of her way to accumulate every possible form of hindrance for the wayfarer. The passage here in Garan is along steep paths scarcely half a foot broad, along the border of precipices that go sheer down into the foaming river that roars several hundred yards below. Often there is no other path than the foothold that one may get in the small roughnesses of the steep precipice of gneiss. The difficulties culminate in three places between Shambedeh and Kuh-i-lal (*The Ruby Mountain*); and I have named these places the Devil's passes, numbers one, two, and three. Here horses, donkeys, and baggage had to be hoisted with ropes from one terrace to another, in order to get across the sharp ridges which run from the Southern Pamirs towards the valley of Garan, their western ends falling sheer, like the gable of a house, down to the Pandsh.

In September, October, and November, these passages may be avoided, since the depth of water in the Pandsh at this time of year is generally so slight that, riding with great

caution, the horses can wade along its edge. During winter, however, the snow-drifts, of which I will speak later on, hinder such a journey; and during the spring this tract is made impassable owing to snow-slips, avalanches, and the hurling down of rocks.

In August 1896 I passed this tract by way of the Devil's passes; in October 1898 I passed it along the river; and in March 1899 I took the route along the frozen edges of the Pandsh.

From Kuh-i-lal to somewhat north of Andarab the road again consists of zig-zag paths winding up and down the slopes.

From Andarab to Badjan the river bank can only be used during autumn; and then only by pedestrians. Beasts of burden and saddle-horses have to be sent across the mountains, where there is a pass at a distance of about four kilometres in a straight line east of the river, through which, during the summer, Badjan can be reached in about eighteen hours; but the road is very bad. The road to this pass, which I went through during the summer of 1896, runs due east along a tributary stream which flows into the Pandsh about three kilometres north of Andarab. The stream runs through a very narrow picturesque ravine covered with willows, poplars, crab-trees, wild pear-trees, and shrubs interwoven with clematis and honeysuckle. On some of the terraces, where the water oozed down from the river, we rode through a wood of umbelliferous plants the height of a man, which was the haunt of great numbers of mountain fowl. The ascent is very steep and dangerous for beasts of burden up to 3000 metres above sea-level; and the horseman has to lead his horse by the rein from one terrace to another. At a height somewhat above

3000 metres, the growth of trees almost stops, and here and there on the slopes we find a sporadic growth of juniper. The little groves of these trees are generally the haunt of the small mountain panther, which is very common here. This animal has, all the year round, a very thick fur, almost snow-white with dark spots, and a remarkably long tail. By very complicated paths that wind amongst a number of rounded hills, partly covered with grass and partly with a strange coarse vegetation, through a chaos of slate, over which it is very difficult to find one's way, we pass at last above the tree-limit to the top of the pass some 3771 metres above sea-level.

The descent to the north is for a short distance very dangerous, across heaps of loose slate and rocks, through which the tributary streams force their way towards the north.

Thence inhabited places are soon reached by going down through sandy heaths with a poor vegetation and willows. Around these inhabited places, where water is plentiful, a luxuriant vegetation is found upon the small terraces where the Tajiks grow corn and fruit round their flat-roofed clay huts. The soil is fertile all over the mountain and, with a plentiful supply of water, it produces a rich vegetation.

On the northern side of the pass the road runs for the most part along the little river which flows into the Pandsh at the town of Badjan. At the lower part of this river, which runs through a cleft in the granite only about ten metres broad and several hundred metres deep, the path passes along narrow terraces beside a dangerous abyss, at the bottom of which roars the river. The path winds in snake-like coils along the rocky walls, the curves being often

so abrupt that the little Kirghiz horse must bend his body to be able to stand on all-fours upon the path.

The whole valley or cleft seems to be blasted by the frost; it looks as if it had been cut by one mighty blow of an axe into the solid granite rock; it is exceedingly wild, romantic, and imposing. The sun only reaches down into this narrow cleft for about an hour in the day, and consequently the cold is very severe. Icy cold drops of water drip down from the rocks on to the traveller's head, and long icicles which hang round about on the gloomy rocks, which have been torn into curious shapes and figures, give this cleft a very mystical and diabolical character.

In September and October this pass can be avoided, and one can go along the Pandsh from Andarab to Badjan; but only pedestrians can move this way. Beasts of burden, all the year round, have to go through the pass, if one is not fortunate enough to pass the place at a period during winter when the river is frozen and there is not too much snow, when one can ride on the frozen river. However, owing to its rapid current, this proceeding is at the best always one of considerable risk.

The Pandsh valley is here so narrow that the river can just wind through it. From the steep mountain slopes enormous quantities of great blocks of gneiss have rolled down into the valley—these blocks have partly filled up the river bed, and they have made the narrow banks almost impassable, so that, all the way, one must crawl or jump from one block to another. A little way south of the town of Barchadeh the Pandsh runs through a narrow granite gateway; up the walls of this narrow passage one may climb, on foot, though with considerable risk, by getting a foothold in the roughnesses of the rocky cliff, and

gripping with the hands as though climbing a ladder—a false step and a fall would send the blunderer down into the turbulent stream which with swirling eddies and roar of cataracts rushes below in deafening din, churning its way impatiently amongst innumerable boulders. Here we passed through a natural cave formed in the rocks, to get to which one had to creep like a chimney-sweep down a narrow hole just large enough for a man to squeeze himself through. This hole is about ten metres deep; from its bottom a short horizontal passage is gone through by crawling on all-fours, when one comes out upon a ledge of the rock above the waterfall with room enough for a couple of men to stand. Thence, by setting our feet carefully in the roughnesses of the wall-like surface, and by spreading out the fingers so as to cling to the rock as if by suction, we crept on towards the north along the river till we reached a bridle-path a little south of Mishus. Hence

DIFFICULT PASSAGE ON THE RIVER PANDSH IN GARAN, SOUTH OF THE VILLAGE OF BARCHADEH

VIEW TOWARDS THE EAST FROM THE ROOFS OF OUR WINTER STATION AT KHOROK

the horses and beasts of burden had to be taken further in towards the mountains, where with great caution it was possible to lead them across.

To give some idea of the difficulties met with on our march through the Pandsh valley, in October 1898 it took us three hours in some places to move thirty paces in a northern direction, and this in spite of the fact that we employed as many men as can be employed in such places.

At the town of Mishus the valley widens out and gives room for a small kislak, with corn-fields and fruit trees—apple, apricot, mulberry, peach, and walnut—water being plentiful. North of Mishus the valley again narrows into a dark ravine until it reaches Khorok, where it widens out considerably, the mountains, more particularly the Badakshan range, receding further towards the west.

Here a somewhat broader valley is formed by the junction of the waters of the Gund and Pandsh, giving ground for the chief town of the province of Shugnan. Khorok consists of two villages—Bar-Khorok (Upper Khorok) and Zir-Khorok (Lower Khorok)—situated along the Gund, which is here about fifty to eighty metres broad. They stretch along the Gund from where the Shakhdarra joins the Gund up to the Pandsh. This valley is only comparatively broad. The promontories to the north and south of Khorok reach a height of 2919 metres and 3552 metres above sea-level as calculated by us, and on December 21, 1898, these promontories prevented half of the sun's heat from reaching into the valley. It required little imagination to tell us how much worse the still deeper and narrower valleys of Garan would be situated as to light and warmth.

As regards the passage in winter-time through Garan and

Vakhan, there is this curious fact, that whilst Garan is covered with large masses of snow from mid-November till far into April, the snow does not remain lying during the winter from Barshar through Ishkashim and Vakhan—not even along Pamir Darya right up to the pass of Khargosh (*The Hare Pass*). At Pamir Darya, 3800 metres above sea-level, the Kirghiz from Yashilkul winter with their nomadic camps, the cattle being out all winter feeding on the dry grass. In Vakhan also the cattle are out almost all winter when it is not too cold; while in Garan they have to be kept in byres, or would perish in the snow.

I take this strange fact to be due to the constant strong westerly wind that blows in Vakhan, called by the people of Pamir the "Vakhan Wind." In Garan it is so calm during the winter that the direction of the wind can only be found by the aid of a candle flame; and in summer this calm is only interrupted by the ascending and descending morning and evening breezes, or by local gusts. In Vakhan, on the other hand, a strong west wind blows year in and year out. This western wind is typical of the whole of the Eastern Pamir; during the summer it sweeps the dust and sand through the valley, during the winter it clears away the snow.

In the narrow valley of Garan, which lies athwart this, the chief direction of the wind, the snow drifts together in such enormous masses that the passage along the Pandsh is often impossible during the winter, and the narrow side-valleys, with their deep ravines, are always barred at this time. In Vakhan, on the contrary, the west wind blows freely through the mountain gate at Sebak and Ishkashim all through the Pandsh valley. In March 1898 we rode through Vakhan, and often met with such snow-storms

that we could scarcely see the heads of our horses, but the snow departed on the wind and left the ground quite bare.

Whilst avalanches and snow-slips are very dangerous in Garan, particularly in April, and especially in the narrow side-valleys, this danger is unknown in Vakhan. The danger, however, of falling rocks is everywhere very great —the boulders becoming loosened by the water during spring-time—and many of the natives perish in this way.

The making of roads has been left to Nature by the people, and the manner of crossing rivers is as primitive—boats are unknown, and could only be employed in very few places owing to the rush of the stream. Between Ptuk and Shirtar in Vakhan, and at Somdjen in Ishkashim, boats might be used for the crossing. In Vakhan only two bridges were found across the Pandsh, and none in Garan ; indeed, no bridges are made across the Pandsh the whole way northwards to Kalai Klumb in Darvas. The bridges in Vakhan are near the towns of Drais and Namatgut, and are so rickety that they can only be crossed at the peril of one's life. Two long trunks of trees are placed from each bank between bridge-heads formed of trunks of trees made secure in piled-up heaps of stones—in the middle of the river these trunks are bound together with osier-bands, so that the whole structure resembles a safety net for high-trapeze athletes, and on top of this hurdle-work flat pieces of slate are placed. A man and a horse can pass over such a bridge at the same time, if the horse's rein is so long that man and beast are not on the middle part of the bridge at the same time. Across such-like bridges I passed the Surkhab with my caravan in Karategin in 1896.

Across the smaller rivers the natives make bridges in the following simple way : they bend a tree, or the branches of

a tree, across the stream whilst the people on the opposite bank fasten it with osier-bands, then they can crawl and climb like monkeys from bank to bank, with a small burden on the back.

The chief means of water transport employed by the people is, however, the *gupsar*—the natives are most skilful in the handling of this rickety craft, and accidents are most rare. It is the means also that the European traveller must employ when he cannot ride through the current. The word *gupsar*, also called by its Turkish name of *sanach*, is of Iranian origin, meaning "ferry"; and the place whence the ferry starts is also called *gupsar* or *gusar*. The *gupsar* is made of the entire hide of an animal, the skin of a goat or wolf being preferred. It is tanned quite smooth, the holes at the head and three of the legs are tied taut, while in the fourth leg is placed a wooden tap with a wooden stopple. Through the tap the skin is blown full by the native, who seizes the tap with his left hand, and with his left elbow presses the distended hide close up to his chest. He now throws himself into the stream, and, whilst the hide keeps him above water, he, with his legs and right arm, works slantwise across the river. A great deal of practice is necessary to gain facility with the *gupsar*, especially to acquire the habit of keeping the *gupsar* steady with the left arm whilst the tap and hand are kept above water. The *gupsar* is of course apt to rise above the water, and if this happens it is very difficult to get it below the surface again in a swift current. Where there are not too many rocks and the stream is not too rapid, the natives will often go long distances in this way. Thus in the summer of 1896 I saw half a dozen natives, one behind the other, coming down the river Shakdarra to Khorok, on the river Gund,

on their *gupsars*. They had strapped their small bundles of clothes across the nape of their necks so as to keep out of reach of the water. At first glance I took them for a flock of water-fowl, but fortunately, I looked a second time, and thus an ugly accident was avoided.

EDDIES IN THE RIVER PANDSH NEAR THE VILLAGE OF MISHUS

When women and children, baggage, sheep, goats, or donkeys are to be taken across the rivers, a small ferry is made of several *gupsars*, on to which are lashed branches and skins. A ferry made of six *gupsars* will carry three men besides some baggage. It is steered by two naked natives who, holding the ferry with their hands and swimming with their legs, steer it through the eddies.

The crossing is made where the river bends, so that the current runs slantwise from one bank to the other; and the task of the swimmers is to prevent the ferry from turning round in the whirlpool. Large animals like horses are made to swim the rivers—they are driven into the stream in

a place where it curves, and the current then carries them so far towards the opposite bank that they can gain a footing there; they are then enticed ashore by coaxing cries of "Mö, mö, mö." Of course it happens now and again that a horse takes a wrong direction in the current and is carried away by it down stream, but generally the little

THE FORTIFIED WINTER STATION OF THE EXPEDITION AT KHOROK

intelligent horses perform such a crossing in the most neat and deft way.

The frequency of the deposits of sulphur and the great number of hot springs seem to indicate that the territory round the Pandsh is volcanic. Earthquakes are very frequent everywhere in the valleys of Pamir, and on the way from the Hindu Kush to Karategin in 1896, 1898 and 1899 we experienced some rather violent shocks which, amongst other things, caused the collapse of a mosque in Karategin and of an old castle in Darvas. During our winter stay in Khorok, on the river Gund, our house was

now and again shaken by earthquakes to a most disagreeable extent.

It is of course impossible to determine whether these earthquakes are connected with volcanic workings or whether they are the result of collapses in the inner hollows of the mountains, especially as our knowledge of these things is still so very limited. It always seemed to me that the direction of these earthquakes was north and south.

Hot springs, which are found everywhere in Pamir in great numbers, are used by the Kirghiz as well as by the inhabitants of the valleys of Pamir for bathing and as a remedy against diseases; they are at the same time regarded as a kind of sanctuary. We found such springs in the Pandsh valley on the mountain slope about one kilometre north of Zunk, and near the kislak of Sirgyn, and about three kilometres south of the kislak of Barshar, besides the before-mentioned geysers at the kislak of Shund by the river Garm-chashma Darya.

The spring at Zunk is situated at a height of 2969 metres above sea-level. It runs into a basin dug out by the natives and covered in by a house, in which basin they bathed. The water in the basin was at a temperature of 44.5° Centigrade; but as cold water trickled into the basin from the mountain slope, the temperature of the spring itself must have been a good deal higher than this. In the house was a strong sulphurous smell, and the colour of the water of the brooks was of yellow ochre, as they flowed round the house and down the slopes amongst the tufts of grass that were here and there covered with layers of salt. A sample of the water which we took with us showed that it contained salts of lithium, natrium, calium, calcium, and magnium.

The spring at Sirgyn, which issues slowly out of the foot of the slope south of the village, had in its crater a temperature of 32.5° Centigrade; and the test of a sample, brought home from it, showed that it contained salts, amongst which were carbonates of lithium, natrium, calium, calcium and magnium.

The spring south of Barshar issued from the foot of the mountain slope in much the same manner as at Sirgyn, 2650 metres above sea-level, with a slight pressure—it had a temperature of 30.4° Centigrade in the crater, and the water sample showed that it contained salts of lithium, natrium, calium, calcium, and magnium.

Nothing certain can be said as to the metals and precious stones to be found in the mountains. Presumably metals are found in the mountains round the Pandsh valley as in the rest of Pamir, where gold, copper, iron, and zinc have been seen here and there; but as the finding of these metals has only been accidental, and no systematic examination has ever been made, it cannot, of course, be known if the mountains are rich in metals or not. I myself have found traces of gold in the river sand. The other metals were found and shown to me by Lieutenant-Colonel Zaitzef, the present chief of the district at Osh in Ferghana, who is very well acquainted with North Pamir.

Of precious stones, great numbers of garnets are found in the slate on all the mountain slopes in Vakhan, Ishkashim, and Garan.

Near the kislak of Kuh-i-lal in Garan are some caves in the rocks where the natives have tried to dig out spinel. They told me that in former times pieces had been found of the size of a hen's egg, but the mines were no

longer worked. The caves and the slopes round about them were full of little bits of this mineral, of which we brought home specimens which were examined in Copenhagen. In the caves we found thin veins of spinel amongst other kinds of stones.

CHAPTER II

The climate of the Upper Pandsh valley

It will be seen that the climate of the Upper Pandsh valley varies considerably in the different parts of the valleys, as is the case in all mountain regions. The greater or less height, the direction, the breadth, the altitude of the surrounding heights, the water supply, all these things are of importance in the matter of climate, and cause strangely various conditions of atmosphere in the valley from Langarkish to Khorok, situated at about 37° lat. North, and varying in altitude from 3029 metres (Langarkish) to 2027 metres (Khorok).

The climate may be characterised as dry, being indeed rainless, with a very great difference between the summer and the winter temperature, and with sudden cold change from the day to the night, the mountain winds rising and falling during the day, often becoming strong gales and even hurricanes about two or three hours after the sun reaches its height, the valley and bare mountain being then at their fullest heat.

The Vakhan valley, running east and west, is bathed in sunlight from shortly after sunrise to its very bottom and on both its mountain slopes; whilst into the narrow deep valleys of Garan the sun does not reach down until two or three hours later.

The deep, narrow side-ravines, caused by the bursting of the rock through the freezing of the water that percolates through it from the mountain snow, are often so cold that during the summer icicles hang down from near the base of the mountain sides, the sun only reaching down into these ravines for about an hour in the day.

The earth being the chief source of heat to the atmosphere above it by yielding to the air the warmth it receives from the sun, the different play of the sun's light on the valleys causes intricate atmospheric conditions, as the sun now blazes into a ravine with all its warmth, now hides behind a mountain peak, now bathes one slope of the valley whilst the other is in deep shade. Not only the warmth of the air but the wind is influenced thereby. There are sudden whirlwinds which whirl up dust and sand high into the air; and as strange are the sudden gusts of wind which sweep down into the heated broad valleys from more highly situated valleys into which the sun cannot reach or reach but little.

Thus, whilst some parts of the valley of Vakhan, watered by tributaries, have the most wonderful climate and a rich vegetation, other parts of the valley are continually exposed to the west wind, which always blows in these regions through the summer, whirling great dust-storms from the sand-dunes of the Pandsh, and through the winter blowing nipping, cold, and dry. It is only where the mountains and their spurs form natural screens against this wind that the vegetation and agriculture become of any importance.

Whilst the chief valley of the Vakhan is all the year round under the infliction of this strong west wind, just the reverse is the case in Garan, where calm generally prevails.

Very typical of Garan and the narrow parts of Vakhan is

the slight ascending valley-wind which springs up during the forenoon regularly, as in Vakhan, about nine or ten o'clock, and is caused by the ascending of the heated air of the valley. Another typical feature of this region is the "mountain wind," which often sweeps down from the mountain crests as soon as the sun passes behind the peaks with the blustering outburst of a storm and with hurricane violence, especially in the narrow valley of Garan. The arrival of these winds can be foretold with perfect exactness. The evening wind arrives a few minutes after the sun has sunk behind the mountains; and the morning wind follows close on the warming of the slopes and bottoms of the valleys by the sun.

The wind is very slight in Garan, except for these "mountain winds," which only last about an hour, and a stronger wind which always springs up a few hours after the sun has reached its height in the heavens, probably owing to the difference between the heat of the valley of Garan and its neighbouring valleys, which is then at its greatest. In the winter especially it is often so calm that the direction of the wind can only be found by the aid of the flame of a candle.

The calm weather in Garan causes the heat to be felt more oppressively here than in Vakhan; yet it also causes the cold of winter to be more severe. The cold air sinks down into the narrow valley and lies there, whilst the exchange of air in Vakhan causes a rise of temperature. Without a comparison of exact temperatures, however, this fact would not strike the traveller, for the cold during the winter is felt far more in wind-swept Vakhan than in calm Garan, in spite of the higher temperature in Vakhan, owing to the constant bitter winds. We have seen that whilst the

valley of Garan is buried deep in snow all the winter, the wind fiercely sweeps it out of Vakhan and Ishkashim, though these places are on higher ground, so that no snow lies here in the winter; indeed, in winter-time, whilst in the Garan valley there is often all through the night and until noonday an opaque frost and mist of hoar-frost hanging along the ground, it is always clear in Vakhan. Snow-storms rage all the year round in all the valleys; but in Vakhan the snow-flakes are only seen in the air, they disappear with the wind almost as quickly as they come.

The nights are always calm and clear, and, as a consequence of the strong radiation, comparatively cold; yet the radiation is somewhat lessened by the evaporation of the rivers and numberless water-channels, as well as by the vegetation, so that the transition of temperature from day to night is not so sudden as in High Pamir.

The day temperature is greatly augmented by the radiated warmth from the naked rocks which become so heated by the sun that one cannot touch them without burning one's hands. The temperature of the surface of the earth itself in the tilled valley was, as a rule, in August from 35° to 45° Centigrade. The sudden changes of temperature from day to night causes stones and rocks to burst, and grinds the loose masses of slate into dust; this, together with the levelling and disintegrating action caused by frost and water during snow-melting time, and by the avalanches that fall in spring, may possibly in the course of time cause the entire destruction of these valleys—filling them up partly with the masses of falling rock and partly with the deposits thrown down by the turbulent mountain streams that are constantly raising the level of the valley bottoms.

In the Upper Pandsh valley the snow generally melts in

April and May. At the end of May and in June the valley becomes green everywhere; and the summer lasts till the first days of September, when the temperature often rises to a suffocating heat. In July and August a temperature of 30° to 40° Centigrade is quite common. The relative humidity and the quantity of cloud are much greater than in High Pamir. The humidity is generally between 20 and 30 per cent. The clouds generally consist of cumulus which, above the mountain crests, are probably formed by the currents of air being forced upwards and becoming cooled. Sometimes they rise towards zenith; but as a rule they only form into a broken wreath of small clouds round about the crests of the mountains, which, however, are sufficient to prevent the sun's radiation from being so trying as in High Pamir.

In the middle of September, autumn sets in, the leaves are falling, and snow-storms are seen in the upper heights of the mountains; whilst below the snow regions a little rain will often fall. The heat often remains oppressive until far into the autumn—in October and November we were obliged to sprinkle our tents with water to procure coolness.

At the end of October and the beginning of November the snow-storms descend the mountains further and further into the valley. The clouds rise from the horizon above the mountain crests and gather together in the zenith, and then fall down as heavy smoke-coloured nimbuses around the mountain tops—and as snow-flakes mixed with rain fall in the valley. Winter has now come round with its greater masses of clouds and greater percentage of moisture—generally about fifty per cent.—with, as a rule, its dense snow-storms, and, as an occasional relief, its clear frosty

weather. It lasts without interruption to the end of March, nay, sometimes even to the beginning of May. In winter the temperature will fall during the night to 25° and 30° Centigrade below zero; but during the day it is generally between 15° and 20° below zero. It very seldom rains; and the little rain that falls is always but the forerunner of snow. When the snow falls in the higher regions during the warm part of the autumn, a little rain always falls in the belt below the snowfall.

The dry mountain climate, where no trace of infectious disease is found, must be acknowledged to be very healthy; and from a climatic point of view the small sheltered side-valleys where the kislaks are situated are exceedingly pleasant dwelling-places.*

* Meteorological Observations from Pamir, 1898–99. O. Olufsen, Copenhagen, 1903. And in the Geogr. Tidskrift, 14 B. 3-4 Hefte, O. Olufsen. Den danske Pamirexpedition, 1896. The Second Danish Pamir Expedition, Measurements of the Electric Tension of the Air. By A. Hjuler.

CHAPTER III

The villages or kislaks of Vakhan and Garan and the number of inhabitants—The inhabitants of the Upper Pandsh valley—The language—The clothing

THE villages, or *kislaks*, in Vakhan and Garan from Langarkish to Khorok on the right bank of the Pandsh are :

Langarkish	about 9 houses,			3029 metres above sea-level				
Zunk	,,	30	,,					
Sirgyn	,,	25	,,					
Dries	,,	5	,,					
Yinef	,,	5	,,					
Drais	,,	15	,,	2886	,,	,,	,,	
Varang	,,	15	,,					
Venungut	,,	7	,,					
Yamk	,,	3	,,					
Yemchin	,,	5	,,					
Torgus	,,	5	,,					
Ptuk	,,	10	,,	2868	,,	,,	,,	
Semut	,,	5	,,					
Shirtar	,,	10	,,	2888	,,	,,	,,	
Darshai	,,	9	,,	2841	,,	,,	,,	
Si-khanah	,,	3	,,					
Namatgut	,,	9	,,	2696	,,	,,	,,	
Rang, or Röndh	,,	11	,,	2702	,,	,,	,,	
Nut	,,	14	,,					
Somdjen	,,	6	,,					
Barshar	,,	4	,,	2653	,,	,,	,,	
Khosedeh	,,	5	,,					

Shambedeh . .	about 3 houses,	2919	metres	above sea-level
Bâgsâ, or Bâgs .	„ 3 „			
Seis, or Deis . .	„ 3 „			
Kuh-i-lal . .	„ 2 „	2584	„	„ „
Andarab . .	„ 9 „			
Badjan . . .	„ 3 „			
Barchadeh . .	„ 3 „			
Mishus, or Darmarak	„ 7 „			
Pies . . .	„ 5 „			
Gaidjak . . .	„ 5 „			
	In all 253 houses			

Moreover, the kislaks at the river Garm-chashma Darya :

Râch . . .	about 3 houses		
Shund . .	„ 4 „	2566	metres above sea-level
Vâgs . . .	„ 3 „		
Shâh Hindarah .	„ 6 „		
Senib . . .	„ 5 „		
Chilmerâb . .	„ 3 „		
Delâk . . .	„ 3 „		
Miridasht . .	„ 6 „		
	In all 33 houses.		

and a small kislak of three houses on the upper stream of the river Badjan, at the northern side of the pass of Andarab.

The total number of houses is thus 289; and if we reckon, on an average, five persons to each house, the total number of inhabitants is from 1445 to 1500. This must not of course be considered an absolutely strictly accurate table of the number of houses; possibly some here and there in the ravines may have escaped our notice, though their number cannot be enough to affect our calculations seriously. Zunk and Sirgyn are the largest kislaks, with 125 to 150 inhabitants, whilst all the others have about ten to fifty inhabitants to the kislak.

THE INHABITANTS OF THE UPPER PANDSH VALLEY

The inhabitants of the Pandsh valley are doubtless principally unmixed descendants of the old Iranian people, who, as far back as we can trace, have formed the principal part of the population of Transoxania, Turkestan, and the mountains south of these to the Hindu Kush. Both the language, of which the expedition has collected a record that will be published later, and the anthropological material show that the population consists of pure Iranians. It is only in the eastern part of Vakhan that some of the people seem to have a partly Indian stamp of feature. This is easily accounted for when we realise that the intercourse through the passes of the Hindu Kush, and more especially through the pass of Boroghil, has occasioned a mixture of the Iranian and Indian stock ; also the former rule of the Siaposh in Vakhan has presumably left its traces in the mixture of population thereabout, as we shall see later on. Further west and north in Ishkashim and Garan the population is of pure Iranian type—a middle-sized, mostly dark-haired people, with longish faces and marked features. The women are much shorter than the men, and their hair is always raven-black, whilst a few of the men are rather fair-haired. Their features are much coarser than those of the present-day Persian, who is not pure Iranian ; still, the coarse features of the Iranians of the Upper Pandsh valley are presumably largely due to their primitive conditions of life, as the manner of life in all nations produces a more or less refined type without, in the main, changing the features.

The people here have been moulded by the hard toil which goes to the earning of their very bread in the poor

and, from the field-worker's point of view, troublesome mountain agriculture. Their time is wholly taken up with winning their food and raiment; they have had no time or leisure to attend to anything but strictly material affairs.

MAN FROM ISHKASHIM (PROFILE)

They are all slender, and by nature are trained sportsmen who can perform incredible feats in climbing up and down the mountains with the aid of their long alpenstocks. Stout people are never seen amongst them.

The Vakhans call themselves Vakhé; the inhabitants of Ishkashim called themselves Ishkashimé; and the Garans, Garané. In the ethnography they are classed amongst the

Galchahs, and are, as we said before, Iranians or Tajiks —in other words, they are of the same origin as the Tajiks of Bokhara and Turkestan; so perhaps the most correct description of them would be the Mountain Tajiks.

The type is rather handsome, more particularly the women, who in their youth have good features; but they grow old early owing to uncleanliness, hard work, and early marriage. The men are at their handsomest when boys and when old—the old Iranian is of a very handsome, dignified and aristocratic type. These people are of a very amiable disposition, and are a pleasant folk for strangers to deal with. They are hospitable, polite, and very discreet; but, as they are also very intelligent and diplomatic, it is very difficult to avoid their wiles if they should intrigue against one in a spirit of ill-will.

THE LANGUAGE

The principal language of all the Pandsh valley is the Shugné, an old Persian tongue spoken by the Shugnans in Shugnan, Garané, Ishkashimé, and Vakhé. Each of the provinces has, however, a special dialect of the Shugnan language, the difference between them, however, being so slight that the people can easily understand each other.

In Vakhan there is also spoken an older Iranian language as well as the Shugnan tongue, which Shugnan is only spoken by the people of quality. This older Iranian tongue is the original tongue of the Vakhans, which now seems to have degenerated into a country dialect. All the people of Vakhan speak this language; and as a rule the children know no other, but such as are likely to have intercourse with their neighbours of the other provinces

NATIVES OF GARAN

learn the Shugnan tongue later on. And as a consequence of the Kirghiz living near them, some of the natives of the Eastern Vakhan can understand Turkish.

The Kirghiz of High Pamir speak a Turkish dialect which is so much like Ottoman Turkish that in a short time one is able to make oneself understood by this people with the aid of this language.

THE CLOTHING

With regard to the women's clothing, it is alike in Vakhan, Ishkashim, and Garan, with a few exceptions in Garan. The principal colours are white and brown in all the materials which are woven here, the want of dyes compelling them to keep to the original colour of the wool. White, dark brown, and black sheep are found in these parts; and their woollen stuffs are in consequence always of these colours.

The men's dress consists of a brown or white woollen dressing-gown ("chupân"), which reaches to the middle of the shin. Beneath this they wear a somewhat similar and shorter white or brown woollen shirt ("pirân"). For this shirt, however, white cotton is also sometimes used; but this is imported from Afghanistan or India. The white or brown trousers ("shuvalak") reach a little below the knee, and are tied round the waist with a string, like a bag. They wear short soft brownish yellow tanned leather boots, or rather a kind of leather stocking ("musa"), which, to prevent their falling off, are tied round the ankle with a string plaited of wool of different colours, green, red, and white, that hangs down on the foot in a bow.

While the Sarts in Turkestan and the Kirghiz in Pamir wear long linen or woollen strips wrapped round their feet, and the Kirghiz in Pamir sew a kind of long felt stocking

for winter use, the more well-to-do folk in the Upper Pandsh valley wear stockings ("jirâb"), but the poor people use strips. The stockings, which generally reach to the middle of the thigh, are knitted like a bag, without a heel, and are adorned with very tasteful patterns. Each of the three provinces has its own pattern, so that we can easily recognise them. These stockings are highly prized, and are used as valuable gifts both amongst the natives themselves and for strangers. Great pains are taken in the making of them. The patterns are in all colours, which is probably the reason that they are so highly prized, as dyes are so expensive and rare.

On the head is worn a small brown woollen hood ("chelpök"), which is fastened on both sides so that it resembles a small soft hat. In bad weather it is pulled down over the head like a hood. This head-dress, which is very old, is now going out of fashion. The well-to-do import turbans, from Afghanistan, of long blue or white pieces of linen, which are wrapped round the head itself or round a small braided cap of the kind used everywhere throughout Turkestan. The poor people imitate this fashion, and are delighted when presented with linen for the purpose.

A handkerchief ("löngi"), or a leather belt, is tied round the waist over the long white garment. The handkerchiefs, which are preferred as gay as possible and very long so that they can be twisted several times round the waist, are imported from Afghanistan or Kashmir. A silk handkerchief is accounted one of the most desirable of possessions; but only a minority possess even the cotton ones. The leather belts are imported from Afghanistan, and are provided with small bags, not unlike modern European purses.

STOCKINGS OF THE NATIVES

During winter white tanned sheepskin cloaks are worn, of the same shape as the woollen summer garment. The fur is worn towards the body, and whilst the summer

STOCKINGS OF THE NATIVES

garment is often adorned with a gay braiding on the high collar, the fur cloak has no ornament whatever. During winter the well-to-do often wear cotton breeches ("tumbûn").

Only the rich possess the whole of this wardrobe. The typical costume is the white woollen "chupân," woollen trousers, a woollen shirt, a brown cap, and yellowish brown

boots. The poor often wander about both in the summer and winter dressed only in a ragged sheepskin cloak and an unde-

STOCKINGS OF THE NATIVES

terminable lot of furry and woollen rags wrapped round their legs and feet. When travelling on foot, they always carry a long stick, which is used as a staff and as an alpenstock ; and the natives are very skilled in using it as a weapon.

The bright white woollen garments are preferred; and it cannot be denied that this costume, whether it be worn by the handsome white-bearded old man or man of mature age with his long black beard, is very tasteful, and enhances the Asiatic idea of a dignified appearance.

The men's hair, which is generally black or brown, is worn short; but they do not shave their heads like the Mussulmans of Turkestan. The descendants of holy men, the so-called Saits, wear longish hair hanging down their backs.

NATIVE OF VAKHAN

The women's dress consists, in summer, of a long wide white woollen smock with long sleeves. It is open in front, and is fastened at the neck by a cord of different colours, or by a small buckle. They wear besides, under their smock, a white woollen or cotton chemise and woollen trousers like the men's, always white. In summer they mostly go barefoot; but sometimes they wear boots like the men's, and the more well-to-do wear leather shoes ("shysk") embroidered with gold wire and with pointed turned-up toes; these are imported from Kashmir. On the head they wear a small white woollen or cotton cap ("chelpök") not unlike the European travelling-cap without a brim; and on top of this they wear, when out of doors or when travelling, a white handkerchief ("chil"). During winter they wear fur cloaks like the men. The women in

the valley of Garm-chashma Darya in Garan wear during the summer a short white woollen or cotton jacket or coat above the woollen smock, as well as a woollen or cotton petticoat, a dress not unlike that of the Russian peasant woman. Not that it has any connection therewith, for it is worn nowhere else in the valleys of Pamir.

WOMEN FROM GARAN. THE MEN BELONG TO THE EXPEDITION

The trinkets of the women are few and primitive. Ear-rings of silver are highly prized, as also are rings for the fingers. As a rule these are imported from Afghanistan, and only consist of simple plates or wire, sometimes ornamented with inlaid pieces of lapis-lazuli which is found in the mines of Badakhshan. Both the old and young women wear chains round their necks, sometimes consisting of pieces of lapis-lazuli drawn on a string, but as a rule of stringed kernels of apricots ("pyrk").

On the shoulders of the top garment, and above the breasts, they wear as an ornament some triangular cloth

tassels hanging in a short string. Sometimes written copies of Mahometan prayers are found sewn into these tassels. These are obtained from wandering kalandars or dervishes, and are believed to be protection against illnesses.

The unmarried women wear their hair, which is generally raven black, down their backs; but the married ones wear it hanging down their backs in two long plaits ("shafch"). Long plaits are considered very beautiful, and the length is often added to by plaiting together with it woollen strings of the same colour as the hair. They never wear veils; but on the arrival of strange men they generally throw a handkerchief, or whatever they may have at hand, over the head, leaving the impression that the main idea is to hide the face, since they very freely show other nude parts of the body.

Marriages are contracted between boys and girls before the age of puberty, but as long as the connubial union has not been consummated the girl wears her hair floating down her back.

The little boys as a rule run about naked all through the summer, their only clothing being often a string round the neck on which hangs a perforated stone. The little girls generally only wear a white woollen chemise like that of the women. During winter they are dressed almost like the adults. To add to their charms the little girls often have their cheeks painted with a red dye; and the hair of the boys is closely cropped in a belt from the forehead to the nape of the neck, whilst it hangs down in long tufts on the sides of the head in a somewhat similar way to the fashion amongst the Persians.

An article of dress which is worn in all the valleys of Pamir, from Vakhan to Karategin, is the wooden shoe, exactly resembling the shoe worn in Jutland; these are only worn in winter. In Turkestan they are quite unknown.

CHAPTER IV

Houses and their arrangement

THE towns of these people are of mud houses, built so closely together that the roofs almost form one large flat, across which it is possible to walk over the whole town. The houses are built partly of flat pieces of slate, which are always close at hand on the mountain slopes for the gathering, and partly of grey mud kept together by a frame wall of roughly hewn trunks of trees. Their yellowish grey colour thus merges into the colour of the terraces on which they stand, so that they might easily be passed unnoticed if their position were not betrayed by the trees surrounding them, which at a distance look like small plantations. Between the houses there are narrow passages through which it is just possible to squeeze oneself, and, being like so many mazes, it is very difficult to find one's way through the towns.

These kislaks have a very monotonous appearance, no cupolas or minarets standing out from the flat grey mass, as in other Asiatic towns. When quite near them one notices on most of the roofs a square tower with loop-holes; but as these are often built of the same yellowish grey mud as the house itself, and are wholly devoid of ornament, they do not relieve the general monotony of the

township, which is solely relieved by the tall poplars and the large green tops of the mulberry and apricot.

These people build their houses of the simplest materials and have little idea of decorating them or of keeping them in repair; they seem always to aim at building them in one

THE VILLAGE OF SHIRTAR IN VAKHAN. IN THE BACKGROUND THE SOUTHERN BOUNDARY RANGE OF PAMIR

particular style; their arrangements of detail are everywhere the same, alike for the rich and poor. The hearth-room is everywhere alike in Vakhan and Garan; indeed the poor have only this one room in their houses in which both man and beast consequently pass the winter together.

In the farms of the landed Vakhans or Garans which would correspond to an ordinary Danish farm, the entrance is through a low wooden door in a stable ("hâta"), which, as a rule, is only a square surrounded by a high wall. Along one of these walls are mangers built of mud for the donkeys or horses. The horse is a rare animal here.

Sometimes there is a pent-roof above the mangers ; and along the opposite wall runs, as a rule, a mud-built platform on which the saddles and harness are kept. Through this stable a small channel is generally conducted to a small reservoir of water ; and on the platform mulberry trees are often planted, under the shade of which the people of passing caravans can rest and take their meals.

THE VILLAGE OF SEMUT IN VAKHAN

From the donkey stable one goes through a low wooden door into a small room where are platforms built of mud on both sides. This is the so-called Mehemân-khanah ("Shugnan"), where strangers are received—not being allowed into the inner room where dwells the family of the master of the house. On these platforms are placed primitive agricultural implements and the large household articles for which there is no room in the inner apartment.

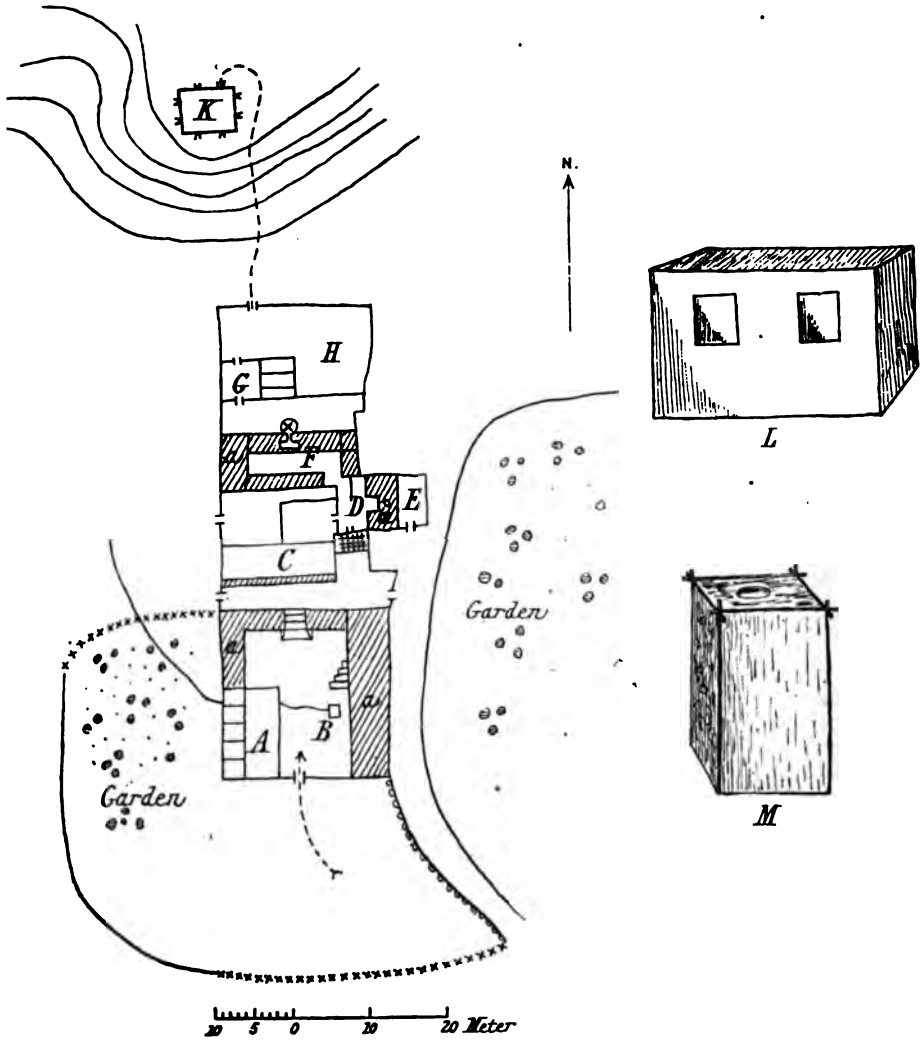
From thence another small low wooden door leads into the hearth-room ("khrûn"), which is mainly reserved for women, and into which only their husbands and nearest relatives are allowed to enter. Several closely connected

families often live together. We, as specially well-recommended guests, were allowed to enter the hearth-room after the women had withdrawn.

The roof of the hearth-room, like the roofs of the other rooms, consisting of rafters covered with fagots and hay,

HEARTH-ROOM IN THE HOUSE OF THE KASI IN THE VILLAGE OF NAMATGUT

with a layer of mud on top, rests on four strong hewn wooden pillars, which are always ornamented with wreaths of ears of corn. The custom of crowning columns with flowers and branches is found in the Zoroastrian religion of the Parthians—or rather in the mixture of religion whereof this creed consisted. In a low-relief from the time of the Parthians is a Magian consecrating a holy column crowned



THE GROUND-PLAN OF THE HOUSE OF THE KASI RAMASHA IN NAMATGUT

A. Donkey stable. *B*. Reservoir fed by a neighbouring river. *C*. Verandah. *D*. Hearth-room for the servants. *E*. Cow-shed. *F*. Hearth-room. x. Hearth. *G*. Sheepfold wherein is placed *L*, which is a detached press built of framework and clay for the storing of corn. *H*. Storehouss. *a*. Clay platforms. *K*. A small loopholed tower, the *réduit* of the inmates. *M*. A detached corn storehouse outside the house.

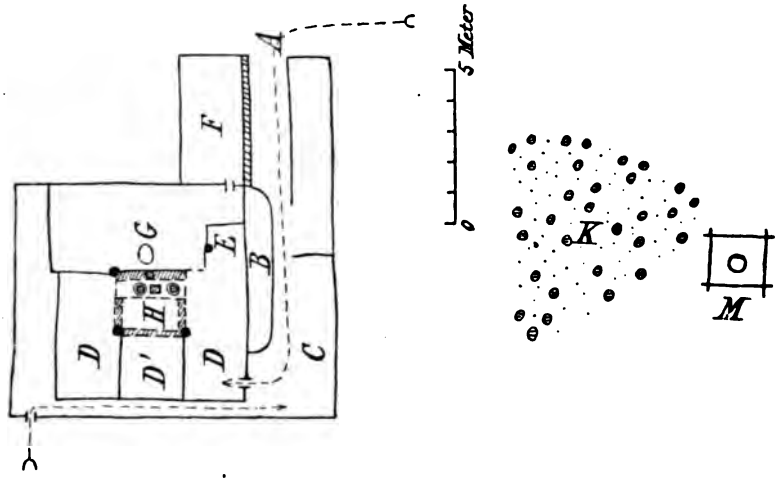
with wreaths. As the Parthian realm embraced all Bactria, it is possible that the custom may have originated as far back as from that period. On the outer side of all the pillars are broad clay platforms three-quarters to one metre high, so that the space in the middle forms a square hole ("yârich"). In the platform to the right, in rare cases to the left, of the entrance is the hearth ("ghögöf"), which consists of a cavity in the platform ending at the top in a small vent for the smoke. In front of the platform is the fireplace, and below this in the floor are several ash-pits ("tǫ̈kh"). The other platforms are divided into several stalls ("barköndjë") by partition walls from the rafters of the roof. They do not reach the ceiling.

Each mother of the common household has such a stall for herself, her husband and her children; they are the bedrooms of the different families. The stall opposite the hearth is reserved for the master of the house and his family. If a man be wealthy enough to keep several wives, each of them has a stall to herself and her children; the favourite wife being in the stall opposite the hearth.

In that part of the platform where the hearth is made, and which is not quite wholly taken up with the hearth, is a cavity into which leads a narrow round hole covered by a flat stone. The hole is just large enough for a child to crawl through into the cavity. Here the natives keep their corn, presumably to prevent its getting moist; and in order to prevent its being stolen the entrance is made as small as possible. When the corn is wanted, a boy is sent down and fetches it up in wooden bowls. If there is not room enough for the corn in these holes, then cubical houses of mud are built near the house, to which places the only entrance is a

narrow hole at the top of the flat roof, covered with a flat stone, which is often walled up.

Sometimes there is another room behind the hearth-room where the sheep and goats are kept during the winter, and in this room are detached presses of mud and frame-work. In these presses corn is kept, and the entrance to these



GROUND-PLAN OF A HOUSE IN THE VILLAGE OF BARSHAR

A. Entrance. *B.* Clay platform. *C.* Donkey stable (hâta). *D.* Hearth-room (barköndjë). *D'.* The seats of the master of the house and his favourite wife. *E.* Niche (mondal) for household utensils. *F.* Verandah (peshvâs). *G.* Hearth (ghögöf). *H.* Yârich. ⊙ Fire-holes (tökh) for embers. • Pillars supporting the roof. *K.* Garden with apricot trees. *M.* Corn store-room.

store-houses is only a small hole in the wall of the press, with just enough room for the arm to be put through and fetch up the corn in a wooden bowl.

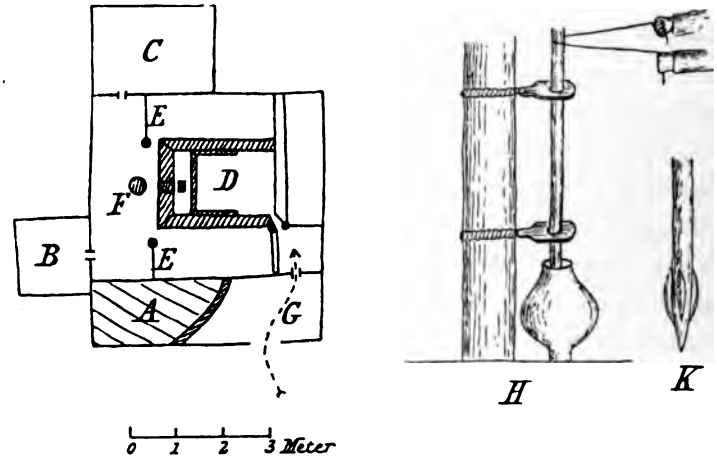
In the middle of the roof of the hearth-room, or women's room, is a square hole covered with a wooden trap-door which is opened and shut by the aid of a pendulous stick that hangs from the trap-door. Through this trap-door the smoke from the hearth escapes, and the light shines into the room, windows or wooden shutters in the wall being

unknown here. As the smoke spreads all over the room before escaping at the roof, one must always lie down so as not to be suffocated. The room is, of course, all over soot. When the fire-place is thoroughly heated and only the embers are left, the trap-door is closed and the heat then diffuses itself all over the room.

With the poorer families, who often have only this one room, cows, sheep and goats frequently have their evening fodder in this hearth-room, and stay there during the night. This, of course, causes an incredible filthiness; but even in the houses of the well-to-do the fowls or lambs and kids, being unable to bear the winter cold in the outhouses, are then taken into the hearth-room. For their accommodation there are niches in the walls, where the hens have their nests and where there are beds of straw for the lambs and kids. When we have stayed overnight with these people on our march in winter-time, it has often happened that, having gone to sleep in one of the stalls of the hearth-room, we have been awakened by the hens flying down from their nests just above our heads, or by a lamb bleating above our couches. The most frequent disturbers of our sleep, however, were fleas, which were in such numbers that in the evenings they jumped into our tea-glasses, and we had to fish them out before being able to drink our tea. Lice are said to be unknown in the valleys of Pamir or in the Kirghiz of High Pamir; at any rate, we were never troubled by them, and the Russian garrisons stationed in the Pamir bore testimony to the same fact.

The only attempt at decorating the rooms is found in the hearth-room, where all the primitive household articles, like earthen pots, earthen dishes, wooden dishes, and earthen jugs, are placed on the platform round the chimney-hole,

and where all the articles of clothing are kept in the stalls. Along the walls are drawn white lines, and between several horizontal lines are drawn white figures resembling hands. The lines are made in a very simple way—by dipping a string into flour and flipping its full length against the wall. The hand-like figures are made by dipping the hand into flour and pressing it against the wall. It has presumably a



GROUND-PLAN OF A HOUSE IN THE VILLAGE OF KUH-I-LAL

A. Clay platform. *B*. Stable. *C*. Store-room. *D*. Hearth-room. *E*. Partition wall which does not reach the ceiling. *F*. Hearth. • Pillars supporting the roof. *G*. Entrance. *H*. Butter-churn. *K*. Churn-staff.

religious significance in the Shiah religion, as we shall see later on. In one place in Vakhan we found an attempt at carving on the wooden pillars of the hearth-room in the shape of stiff fancy leaf ornaments that greatly reminded one of the Persian style. In all other places the rooms were devoid of all ornaments, with the exception of wreaths round the pillars.

In the evenings the hearth-room is lighted by the aid of torches ("shuichirâk") of a very primitive kind; on the

pillars nearest the ash-pit is placed a wooden case, pierced with holes, into which long sticks are stuck, the ends projecting above the ash-pits and being smeared with a black combustible dough made of the seeds of a cruciform plant ground together with the stones of apricots. This torch sheds a rather strong light and smokes but very slightly; it, however, drips continually, and it is for this reason that it is

THE VILLAGE OF NAMATGUT IN THE PROVINCE OF ISHKASHIM. EACH HOUSE HAS A SMALL LOOPHOLED TOWER

placed above the ash-pits. At festivals several torches are placed round about the room.

Times must have been very unsettled in Vakhan right up to the present day, for we find not only fortified castles still in a state of defence, extensive old fortifications and fortified mountain caves, but the greater number of the larger houses in the kislaks are in themselves small independent forts with either a loopholed tower ("usdûn") on the roof, or there is a tower in the neighbourhood on some mountain

terrace, difficult of access, which is reached from the house by a secret path. This tower is a kind of *réduit* to which the family can make their escape and defend themselves against the approaching enemy or against a shameless tax-gatherer and his assistants.

When the tower is situated on the roof of the building the ascent is accomplished by a ladder from the hearth-room. The tower is always square and seldom more than a couple of metres high, and each side is pierced with loopholes, from which they let fly stones from double-stringed bows,* or, in more modern times, bullets from old Afghan match-locks. As the heat of the sun can be very trying in these unclouded skies, those natives who possess the larger farms always erect their buildings with the dwelling-rooms facing the north. In the hottest time of the year they sleep on the roofs at night; indeed the roofs are their favourite resort, especially after sundown in the summer-time, and even in winter during sunshine. On the farms there are often open verandahs, especially outside the women's room—the roofs of these verandahs being made of fagots and branches—and if they are especially set apart for the women and children and are not situate in the yard itself, but can be seen from the outside, there is sometimes a lattice in front of the verandah, which gives it the appearance of a cage, through which it is difficult to distinguish the women.

In Vakhan they often build comically shaped huts of branches on the flat roofs, in which they rest both in the daytime and at night—the hut keeps off the sun, and allows free access to the current of air from the Vakhan wind, and is a very pleasant resort. To procure a cool retreat in summer-time they sometimes build, in the same manner as

* Specimens exist in the National Museum of Copenhagen.

they do further north in the Pamir valley (Darwas), huts of branches on a little bridge across a mountain stream, and the running water underneath makes such resorts most refreshing.

Indeed, everywhere in Central Asia, where the summer heat is intense, the people use all their inventive powers in trying to procure coolness. Under large shady trees in the gardens they generally make mounds of clay round the trunks, from which they have a good view over their domain, and, when it is practicable, they lead small water channels round the elevation. Towards the end of the summer, when the large apricot trees are loaded with golden fruit, these mounds under their shade afford a most idyllic resting-place, where the people often take their meals, the women and children staying until a stranger appears, whereupon they all retreat into the house.

The houses in Garan, which is the poorest province, often consist of one room only, the hearth-room—just as is the case with the houses of the poorer class in Vakhan. The house is then generally surrounded on three of its sides by a high wall which, together with the hearth-room, forms a sort of yard where the cattle are sheltered and the firewood is kept.

As we have seen, the arrangement of the hearth-room is everywhere exactly the same; and the hearth is, with few exceptions, always on one's right-hand side as one enters the room.

As an illustration of the continuance of a traditional scheme of construction throughout time in a province which is cut off from the rest of the world, it is interesting to note that the inhabitants of the neighbouring province of Badakshan have a totally different way of building the

hearth-room. Until 1893, when the Russians arrived in the North Pamir and occupied Vakhan and Garan and Shugnan, the Afghans were masters over the land, and had military stations here and there. One of these Afghans had built himself, in the town of Kuh-i-lal in Garan, a house in the Badakhshan style.

Besides the dwellings here mentioned, there are to be found in Vakhan and Ishkashim, from the kislak of Sirgyn to about Somdjen, a great number of caves in the rocks, partly hewn into the conglomerate slopes and partly consisting of natural hollows amongst the masses of slate which have rolled down the mountain declivities.

When I passed through the Pandsh valley in 1896, most of these caves were inhabited, owing to the unusual poverty and disturbances that were prevailing in the provinces. The native princes, Mirs or Shâhs, and, later on, the Afghan Governors, of which each province had its own, and who all considered themselves descendants of Alexander the Great ("Iskandar"), were only princes by the grace and favour of the Emir of Afghanistan. They paid a large yearly tribute to Kabul, which, besides the products of the provinces, included slaves, especially women, whose beauty was considered very great. The tax was levied with extreme severity; only the favourites of the princes owned land, and the lower classes of the people were entirely plundered. Besides which, the different small princes were often at war with each other, a state of affairs that naturally led to the total impoverishment of the provinces.

Russia in 1893 had formally taken possession of the provinces, but had not occupied them. The last Mir of Vakhan, Ali Mardhân Shah, was expelled about the year 1876, and Afghan government officials had ruled the

CAVES IN VAKHAN, WHICH WERE FORMERLY INHABITED AND FORMED A KIND OF FORTRESS

province from the time of his expulsion until 1893. When Russia took possession in 1893 all the Afghan officials withdrew; and as the Russians had not in 1896 occupied the provinces, they suffered severely through the depredations of the Afghans, who were also raiding the country during my stay therein. I shall, however, here only explain the occupation of these miserable caves by the natives.

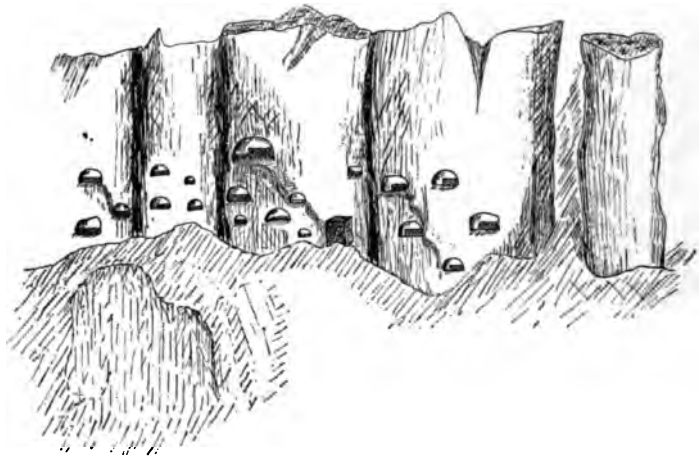
Of cave-dwellings fitted up for permanent use we found several, especially on the tract from Rang to Somdjen. They consisted of a single square compartment, so high that a grown-up man could stand upright inside them. The entrance to the cave was closed by a wall made of pieces of slate, only leaving open a hole just large enough to get through. A couple of these caves near the kislak of Rang had doors fitted into the entrance.

Inside the cave a primitive hearth was found plastered and built of slate and clay. The family belongings only consisted of some rugs and skins on which they rested, and a few household utensils.

The way to the caves always led from the valley between a number of loosened rocks, so that it is difficult to find the entrance.

East of the kislak of Varang in Vakhan there is a collection of about twenty cave-dwellings, situate in a perpendicular conglomerate precipice of about a hundred metres in height, which rises above the mountain slope about 300 metres above the valley of the Vakhan. They are hewn into the conglomerate. Together they form quite a system of fortifications, as they are laid out in three terraces, one above the other. The uppermost row of caves is situate at a height of about fifty metres above the mountain slope. The wings and centre of the caves are each

composed of three large caves above each other, between which led a small path hewn into the precipice. The entrance to these paths was defended from below by a small square loopholed tower. All the caves, of which the largest could hold about twenty men, had crescent-shaped entrances, and in front of all the entrances was a breastwork with loopholes. At the place where one was expected to enter, this breastwork was so low that one could stride over it. Only



CAVE FORTIFICATIONS IN A CONGLOMERATE SLOPE EAST OF VARANG

the wings and central caves had paths leading to them. The rest of the caves, which were situated between these, were reached by the occupants placing sticks into the perpendicular precipice, drawing them out again as they mounted up higher. The caves must have been hewn out under similar conditions of reaching them, and must certainly have been a very difficult piece of work to accomplish.

The Vakhans say that they were made as a protection against Kirghiz nomads, who some years ago plagued the Vakhans by their raiding expeditions; indeed, they are still

much disliked by the Vakhans, who have no dealings with them if it can be avoided. The Kirghiz of High Pamir, not without reason, are looked upon as wandering gipsy robbers whom it is best to drive away as soon as they show themselves in the neighbourhood.

In several of these caves the hearths were quite undamaged, and remnants of meals, the bones of animals, shards, and remnants of firewood, as well as their well-kept condition, showed that they had been in use not very long ago.

According to the statements of the Vakhans, they have been used by them against the Kirghiz, which is very probable. But, on the other hand, it is quite improbable that they were made by the Vakhans; they are most likely the work of the Siaposh, who now people the province of Kafiristan, south of the Dora pass in the Hindu Kush. The Siaposh, "The Black Skin clad"—being the Iranian word from *Siah*, "black," and *push* or *posh* "skin," as they are called by the people of the neighbourhood—ruled over Vakhan not so very long ago, as our researches proved, and their numerous relics of fortifications and fortified castles in the province are unmistakable, being built with much greater military ingenuity than those built by the rest of the population. The cave fortress at Varang was originally constructed in connection with another fortress situate above the cave fortification on the upper slope. This top fortress is composed of several ramparts built in terraces one above the other; and on an elevated spot above the cave fortress stands a square well-preserved tower, which was probably used as an outlook.

The cave fortifications and the upper fortress are connected with each other by a natural pass in the conglomerate precipice, through which a steep and very difficult path

leads upwards. On the slope, outside the upper ramparts, between these and the caves, terraces are formed which were certainly planted with corn and were irrigated by canals, which were led from a neighbouring mountain stream down through the fortress, so that in case of siege they were provided with food and water.

When we regard the local conditions and the weapons at their command, the whole system seems to have gone to make up a very powerful fortress; and the conglomerate precipice itself is a typical example of the way in which the strongly coherent mass of the conglomerate is able to resist the effects of water: for the surrounding looser parts are by degrees being washed away at the melting of the snows, whilst the conglomerate remains unbroken and unharmed. Several places in High Pamir, especially near the place where the Alitshur river joins the Yashilkul, such conglomerate walls or pillars are to be seen—often with a large piece of rock on top, the surrounding parts having been washed away—looking in the distance like fortifications.

In 1896, when my caravan was passing through the western Vakhan and the province of Ishkashim, one day whilst I wandered about between the fallen masses of granite and slate on the mountain slope, I discovered some people lying in holes amongst the rocks—I was in fact walking unwittingly on their roof, which was made of flat slates.

On closer inspection a great number of these caves were found, inhabited by poor people who earned their living by doing odd jobs for the landowners. They were in possession of a few sheep and goats, which grazed on the mountain slope beyond the tilled fields. The greatest number of such dwellings were found in the province of Ishkashim, between

the towns of Rang and Nut, where the Pandsh river bends towards the north. They were made very simply by removing the stones out of the mountain's face so that a hole was made large enough to accommodate a family. The roofs were made of trunks of trees covered over with flat stones—sometimes only of flat stones.

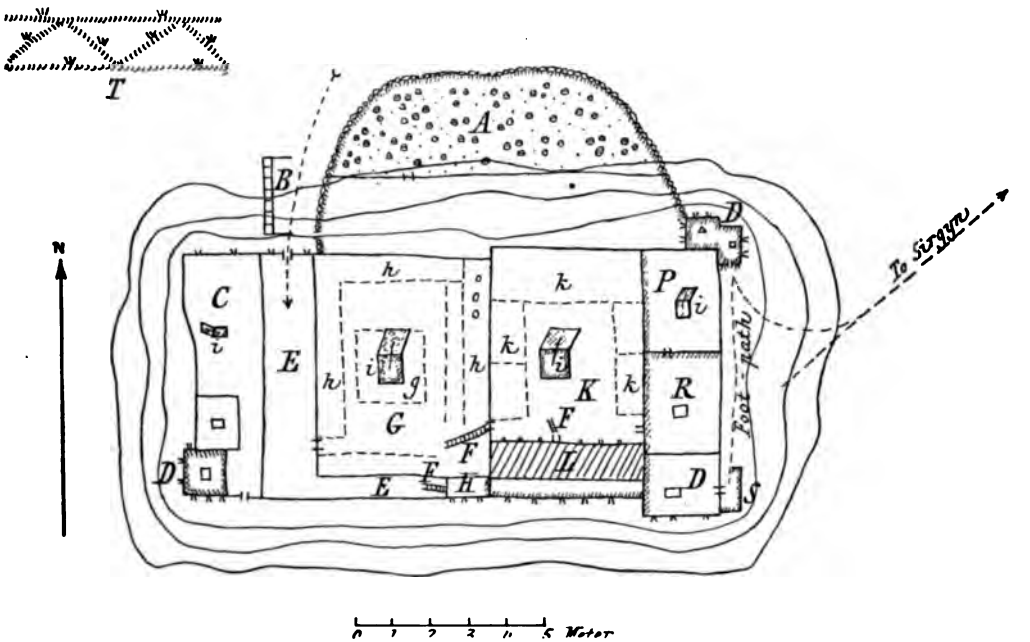
A POOR NATIVE OF GARAN

By the ragged clothing of the inhabitants and the few rugs and ragged skins on which they rested, and which, together with a few earthenware pots for the cooking of food, made up all their belongings, one concludes that poverty had directed their choice in selecting such a habitation. Yet, another explanation is possible: several of the houses in the villages were empty, so that it is probable that their owners, who, in the summer-time, when the passes are open, are annoyed by the pillaging of the Afghans, resort to these caves because they are not easily found; indeed, only an accident could lead to their discovery. The dwellers therein, who were of exactly the same type as the rest of the natives, were very timid and were only with great difficulty prevailed upon to come out

of their caves, for the defence of which they possessed only some long double-stringed bows. When I revisited these provinces in 1898, the Russians had taken possession of them and had founded several military posts, so that life was tolerably tranquil—the caves being wholly deserted.

Of the large inhabited strongholds, which answer to the castles of the Middle Ages, and are the homes of the upper classes and large landowners, there is one in nearly every town, especially on the southern bank of the Pandsh in Vakhan—their tall walls and square towers being plainly visible from the north bank of the Pandsh. The largest of these fortresses, in which resided the last Mir of Vakhan, Ali Mardhân, who owned both banks of the river, is the castle of Kalai Pandsh, situate right opposite to the kislak of Zunk in Vakhan. *Kalai* being a "castle," and *Pandsh* being "five," it has been said that Kalai Pandsh means "five castles"; but five castles would be called Pandsh Kalai, the numeral always being placed first; the correct meaning of the name is, therefore, "the castle on the Pandsh." This castle resembles a large stronghold of the Middle Ages, with high walls and towers built of slate, granite, and clay kept together by a strong framework. It is now the stronghold of an Afghan Beg, or governor, with a garrison of about three hundred men. It is said that five fortresses were originally built on small hills beside each other here; but we cannot now determine whether these ruins were originally fortresses or ordinary houses.

Some of the fortresses on the northern bank of the Pandsh were now deserted and lay in ruins; but the fortresses of Kalai Sirgyn, by the kislak of Sirgyn, and Kalai Chiltak, west of Yemtshin, and Kalai Varang, by the kislak of



GROUND-PLAN OF THE CASTLE KALAI SIRGYN

A. Garden. *B*. Summer stable. *C*. Visitors' room (khuskhanah). *D*. Towers (usdun) with breastworks on the roofs. *E*. Corridors. *F*. Ladders and stairs. *G*. The men's room (dargha). *g*. Hearth. *h*. Clay platforms. *i*. Shutters of cock-loft. *H*. Platform for shooting. *K*. Women's room (khrun). *k*. Clay platforms divided into stalls, the hearth being opposite the stairs *F*. *L*. Covered balcony with latticed front (summer residence of the women). *P*. *Réduit*. *R*. Storehouse. *S*. Outwork in front of the door of tower *D*. *T*. Wall decorations of the rooms.

Varang, were still occupied, and kept in a state of defence, and ready to check an advancing enemy.

As an example of the arrangement of these fortresses, which are in the main alike, we cannot do better than take Kalai Sirgyn (*The Castle of Sirgyn*), which is situated about 500 metres south-west of the kislak of Sirgyn. The kislak itself is on a mountain terrace a couple of hundred metres above the valley of the Pandsh, watered by a mountain stream which flows out over the terrace. On an elevated isolated rock which falls sheer down on all sides stands the fortress of Kalai Sirgyn, towering over the place. It consists of a compact one-storied building about a hundred metres in circumference and about four metres high, provided with a continuous breastwork round the top of the roof, flanked at the corners with square towers, which rise about three metres above the roof of the fortress; in front of all the entrances to the fortress are outworks in the form of raised breastworks. The building is constructed of a very strong framework of enormous wooden pillars and beams, and its walls are made of the ordinary building material—flat slates cemented with clay of about a metre in thickness. The fortress castle of Kalai Sirgyn had formerly belonged to one of Mir Ali Mardhân's chiefs, but was now in the possession of a so-called Ishan, who had come over from the Afghan side.

Amongst the Mahomedans in Central Asia, Ishan is the title of a holy man who is at the same time reputed a sage. The chief occupation of an Ishan is to pray to Allah, perform religious rites, and do deeds acceptable to Allah; but generally these Ishans are great humbugs, who use their influence to fleece the population in every way in order to enrich themselves, or they are half or quite insane. Insane

people are held in great esteem by the natives, who believe that the wisdom of Allah shines through their mad talk, their souls being already in heaven with God, who speaks through their mouths. The Ishans have a great influence over the population, who believe in them as in an oracle. Their advice is sought after in everything. They cure all diseases by prayers or by hanging on the body upon the seat of the disease a scrap of paper on which is written a prayer appropriate to the malady. We often saw the natives going about with a string round the head with such scraps of paper suspended from it. The Ishans all become rich people through the numerous pilgrimages that are made to them; and if no patients come they go about in the kislaks, where no one dares to refuse them hospitality and gifts. They will go to a man whom they have selected as a victim and say: "You are ill, and must soon die unless you give me some of your sheep and I pray that you may live." Most of the natives dare not disobey this summons. Such an Ishan, then, it was that lived in Kalai Sirgyn. He received us very kindly; but clearly disliked our minute investigation of his house, and only submitted to it because it was unavoidable.

From the main entrance, the solid wooden doors of which could be barred with beam barricades, we entered a long narrow passage, and thence passed to the left into the men's room ("dargha"), in the middle of which was a large hearth right under the trap-door of the roof and between four strong pillars which supported the tier of beams; round these pillars were wound wreaths of corn. Along the walls of the room ran a clay platform, where the men had their couches, and above this was a narrower clay platform, whereon were placed the household utensils, wooden and

earthenware dishes, and the primitive agricultural implements. On the walls were hung the inflated skins ("sanatsh" or "gupsars") used in ferrying the Pandsh, and several other things, which shall be touched upon later on.

The Ishan and his men glanced at us suspiciously when we surveyed the house, and he was greatly disturbed when we asked to see the women's room and the other rooms; but as the Mingbashi ("chief of a thousand men") of the district, Tana Beg, who held his command under the Russians, assured him of our peaceful intentions, the women were sent away, and we were allowed to go through the whole stronghold.

From the men's room a door opened into the women's room, and a staircase led through the roof to the fortress on the top of the house. The long passage which one entered from the main entrance was connected with a narrower passage towards the southern side of the fortress, so that the men's room and the women's room formed separate houses in the stronghold. I cannot say whether these double walls, which were only found towards the south, were to procure coolness in the rooms, or if they formed double security towards the side most subjected to attack. Perhaps they were designed for both purposes. The broad passage in front of the main entrance was built to hold the cattle during a siege, and in the narrow passage to the south the horses and the donkeys were stabled under the like conditions.

The women's room ("khrun") was in the same style as the men's, with platforms along the walls, and these platforms were, as in the ordinary houses, divided into stalls with partition walls which did not reach up to the ceiling.

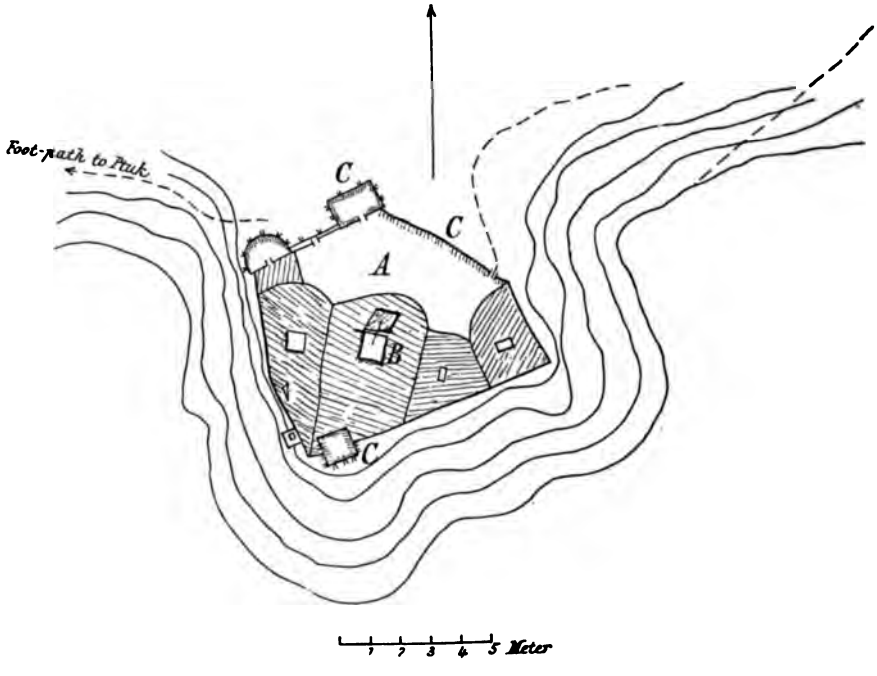
The hearth was at the left of the entrance, and was of a similar construction to that already described. Each of the women had a stall to herself, her husband, and her children, where they rested on rugs and skins spread upon the floor. Several of the pillars were adorned with carved leaf ornamentations, and on the walls were white lines of flour, above which were painted white hands.

From the women's room a staircase led to a covered balcony with a lattice front, whence the women could enjoy the view without being seen themselves.

From the women's room a wooden door opened into a store-room and granary of corn, and from thence a door to the left opened into the *réduit* of the fortress ("huidjirra"), and one to the right into the largest corner tower, the upper storey of which was provided with loopholes and was reached by the aid of a ladder. The holes in the roof, through which one reached the breastworks, were all provided with strong trap-doors, which could be opened and shut from below, like the trap-doors of the ordinary houses. In the *réduit*, the corner of which was flanked by two square towers built closely together, from which a door led into the open air, was a large collection of matchlocks. The doors and trap-door of the *réduit* could all be barred with strong wooden cross-beams.

From the largest corner tower a door likewise led into the open air; and the two doors in the main tower and the *réduit*, which could only be reached by clinging on to the roughnesses of the rock, were moreover secured by a small outwork consisting of a loopholed breastwork. At the opposite end of the fortress, to the right hand of the main

entrance, was a large room to the north ("khuskanah") for the accommodation of guests; and here again both corners were flanked by square loopholed towers, which were reached by the aid of ladders.



FORT CHILTAK, SOUTH-WEST OF TURGOS

The house of a well-to-do Vakhan in state of defence. *A*. Courtyard. *B*. Shutter of cock-loft. *C*. Walls and towers. On all the towers and round the roof is a breastwork about 1½ metres high. The height of the towers above the roof is 3–4 metres. The walls are about 5 metres high. All built of fragments of slate.

The fortress, the defence of which was carried out from the roof behind the breastworks and from the towers, and from the outworks behind the doors, was kept in a perfect state of defence—each tower, each trap-door, each loop-hole was in good repair. On the northern side of the

fortress was a garden, with fruit trees and vegetables, protected by a high wall. On a small isolated rock, about two hundred metres from the fortress, stood a square watch-tower, from which there was a wide view of the whole neighbourhood.

CHAPTER V

Tools—Household utensils—Trades and crafts—Weapons

THE household utensils, as well as the agricultural implements, consist for the greater part of clay or wood. Only very few articles of metal were found, and these were all imported from the south of Afghanistan or the province of Badakhshan, where iron mines are found. Some curved bread-knives in sheaths, and some axes and saws, were the only metal tools by the aid of which they made their wooden articles.

The household utensils were chiefly flat wooden dishes ("kobun"); wooden bowls; large flat earthenware dishes; earthenware bowls; earthenware pitchers of the same shape as those used in Scandinavia in olden time; low flat earthenware jugs for milk and water ("lubt") with a handle and a wide mouth; rather large earthenware pots for the cooking of the food of exactly the same shape as our vessels of Jutland pottery; earthenware lamps, consisting of a small bowl with a handle, in which was placed a greasy wick; melon-shaped baskets ("sabt") of braided straw with lids but without handles, in which fruit and seeds were kept; and, lastly, oblong excavated wooden troughs for washing.

Only in very few places did we see the flat tinned copper

dishes or trays of Afghanistan, on which are served meat, fruit, and pillan, or the Afghan copper jugs ("âbtâbá") for the making of tea.

If there be no mill in the neighbourhood of the kislak an excavated stone and one of rounded form are used as a kind of pestle and mortar for the grinding of apricot kernels, seeds, dried mulberries and bread-corn. The apricot kernels are employed for cooking. Dried pulverised mulberries are eaten in this powdery form, in which they are almost always carried by travellers in a small leathern bag. These are also employed for the baking of cakes, and everywhere take the place of sugar for the sweetening of bread and pastry, as sugar is quite unknown, or at least never seen in these parts.

Sheep's wool, which in Vakhan is of an extremely fine quality, is cleaned with the aid of a small wooden bow with a gut-string. The wool is placed in a heap on a horse-hair sieve, which is also used for sifting flour, and, by beating the wool with the string, it is freed from dust and dirt, and the tangles are unravelled. After the wool is cleansed and washed, it is spun on a hand-spindle, which consists of a wooden rod with a perforated stone or a wooden cross as a crank. The wool is wound on to a winder ("chark") made of wood, and from the winder passes on to the loom, which is constructed in the same manner as the loom used by the Kirghiz. A piece of yarn of about twelve metres length is now suspended in the open air between wooden pegs, and the place where they weave is kept off the ground by a cross-bar suspended by strings on a pyramid of sticks stuck into the ground. This method of weaving is, in spite of its primitiveness, the same as the European method; and the woollen stuff which they

HOUSEHOLD UTENSILS FROM GARAN

weave, always either white or brown, the natural colour of the wool, is very serviceable and often very beautifully woven.

Another kind of loom, on which the ordinary coarse white and brown striped rugs are made, consists only of a wooden frame on which the coarse woollen yarn is stretched, and other yarn is now simply interwoven with these.

The local industries are very few. The white or blackish brown woollen material which is always woven in long narrow pieces for wearing apparel, the coarse white and brown striped rugs, the strings and braids and rope for the cattle which are twisted and plaited of woollen yarn, are, together with stockings, the only things produced in the way of woollen goods. Stouter cord and rope for the cattle and for the agricultural implements are always plaited of osier bands, of which also large baskets are made for hay and fruit.

The tanning of the hides of both domestic and wild animals for boots and for the leather bags used for flour and corn is understood by almost all the natives. The hides of Kiyik and the Ovis Poli, the large wild sheep from Pamir, are especially valued for fur cloaks on account of their long thick fur, but, as they are difficult to get, most people wear ordinary sheep-skin cloaks.

When, to those house utensils, I add sieves made of horsehair or string, for the cleaning of corn and the sifting of flour, wooden spoons, and a churn, everything that is a household possession is set down.

The churn is only found in a few places, chiefly because the luxury of eating butter cannot be widely enjoyed, also because most people who can afford the luxury make their

butter by shaking the cream in a bladder. A few, however, do churn their butter, which does not taste like Danish butter, but has a peculiar greasy taste.

The churn is a large earthenware pot placed close to one of the detached pillars which support the roof of the house. In this pot is placed a stick with wings at the end; at the mouth of the pot the stick plays through a couple of pieces of wood in which are round holes, these pieces of wood being fastened to the pillar. A string is tied round the upper end of the stick, which is made to revolve by pulling each end of the string alternately as it winds on the stick.

WEAPONS

The weapons of the natives are for the chief part bows made of the wood of the apricot tree. The bow is strung with two strings of gut, and flings stones. The stone is placed in a piece of leather, fastened to the strings at their middle. In passing through the Pandsh valley for the first time in 1896, when I camped outside a town or village, all the males of the place would come out to look at the strangers. They were all, from the oldest to the youngest, armed with these bows, which are of the height of a man, and each carried a handful of round stones. When asked if they used arrows, they said that though the Siaposh tribes, of whom they stood in great awe, used arrows, they themselves never did so. We saw them kill little birds with these stone-flinging bows at a distance of twenty to thirty paces. These weapons are to all appearance harmless against an enemy unless the stones should strike the face; but as these people were marvellously skilled in the use of this bow it is

possible that they may be effective. They use, besides the bow, stone slings made of strings and leather.

Only the very well-to-do possess old matchlocks with a wooden fork fixed to the barrel. When this wooden fork is turned forward the matchlock looks for all the world like a pitchfork. In shooting, which is with difficulty accomplished otherwise than in a recumbent position, the fork is stuck into the ground, forming a rest which keeps the barrel steady whilst firing.

Of trenchant arms and goring weapons, we found here and there a few old scimitars; the short sheath-knives which they carry in the belt being more used as tools than as weapons.

CHAPTER VI

Agricultural and pastoral pursuits—Articles of food—Hunting—Animals

THE people all live by agriculture, or the breeding of cattle and flocks.

When the glaciers and snow-water have made their way down the mountain slope they have gradually formed a stratum of loose material deposited from the weathering and erosion of the mountains. The water also, on freezing, expands and cracks the ground rock itself, on which the floods at thawing time have deposited their loose disintegrated mountain rubbish in a sort of terrace in the lower course of the tributary streams. It is on these terraces that the kislaks are situate, with their cornfields and gardens.

All cultivation is attained by irrigation, as in all other parts of central Asia. Outside of the irrigated areas there is no considerable vegetation to be found except, of course, along the banks of the rivers. On the land not directly watered by rivers or irrigation only a spontaneous vegetation is found, and that only of a kind which can adapt itself to being watered at the time the snow melts, and which can do without water for the rest of the year.

There are no forests, as Europeans reckon forests. The upper mountain slopes, outside the river courses, are bare

VIEW FROM THE SOUTHERN BORDER MOUNTAINS OF PAMIR OVER THE TILLED FIELDS AT YEMTSHIN

IN THE BACKGROUND THE RIVER PANDSH AND THE HINDU KUSH

and barren. Only in a few places, as in the valley of the Garm-chashma Darya, high up on the dry slopes, do we find rather large trees of the juniper variety, which grow round about in the crevices of the hard rock, where it is difficult to understand how the tree can get enough nourishment. In the bottom of the same valley is found a rather large wood of tall willows and poplars on an island in the river. By Langarkish and Zunk, on the islands in the Pandsh river, in Vakhan and Ishkashim, on the banks of the Pandsh between Nut and Somdjen, by the upper course of the Kuh-i-lal and Andarab rivers, are extensive copses of willow, poplar, birch, and hippophæ, intertwined with hawthorn, clematis, honeysuckle, and wild rose; and in the quicksand by the Pandsh river large tamarisks grow.

Except in these places, only very meagre copses are here and there found outside the irrigated areas.

Concerning the growth of grass on the mountain slopes, the same thing happens here as on the steppes. After the snow-melting time, when the high slopes and terraces are irrigated, the plain is transformed, and for a short time a rather luxuriant growth of grass and flowers bursts forth, almost as at the stroke of a magician's wand, and lasts until well into July. The natives take advantage of the short time before it is burnt up by the sun and lack of water to send their cattle up into the mountains. Only a few inhabitants remain in the kislaks—as a rule only the old people and children and such as cannot climb the mountains. All the rest wander up to the mountain pastures, just as in Norway, with their cattle; and during this time they live in primitively built stone houses which are built for the occasion, made of heaped up loose stones, with compartments similar to those of the houses in the kislaks. These Ailâks,

or summer camps, are found round about on the high terraces of the mountains in Vakhan and Garan. The centre of the terrace, where the Ailâk is situated, is always occupied by a large fold, consisting, as a rule, of an enclosure within a circular wall, where the cattle are driven in and herded at night to protect them from wild animals and thieves.

When one passes through the kislaks of the province in the beginning of July, one is astonished to find them almost deserted—only a white-haired old man who with difficulty supports himself on his staff, an old woman, and a few children are met with here and there in the town. But in the Ailâks there is plenty of life until the end of July, when they are deserted again for the kislaks — the mountain slopes resume their barren blackish brown aspect, and everything looks like a desert in which the kislak forms the oasis.

The cultivated fields and gardens in the neighbourhood of the kislaks are irrigated by water from the rivers. The water is conveyed by means of a few channels which are seldom more than two feet deep and the same in breadth, cut from the upper course of the rivers on the mountain slopes down to the kislaks, whence minor channels ("wadö") lead the water to every landed proprietor, who again, by means of innumerable little channels, leads the water out over the fields and gardens. It is one of the most difficult of undertakings to keep the channels in order; often they must be led several kilometres in zig-zag or in numberless windings down the slopes. Often it is impossible to make them in the hard rock and they have to be constructed of stones and clay along the mountain sides, and in snow-melting time the earthslips and avalanches destroy the

whole work so that in spring they have to be constructed anew.

As prosperity and the amount of produce depend upon the quantity of water used in the fields, manure never being employed, the distribution of the water is often the cause of strife between the natives. In this respect, justice is maintained, here, as elsewhere, by the Aksakal of the town—Turkish for "white-beard"—the oldest—and the Kasi ("judge"), who by turns command the peasants to open and shut with flat pieces of slate the channels by which their fields are watered. Towards autumn the river dries up, or there is so little water that it cannot be led round to the channels, so that the corn is very short and thin.

If possible they commence to work in the hard but rather fertile earth at the beginning of April. With sufficient irrigation and modern agricultural implements the earth could be made to produce much more than it now does with the primitive implements which are at the disposal of the natives. The fields are ploughed with wooden ploughs drawn by two oxen. The plough itself consists of two trunks of trees notched into each other; the back part, which is the longest, is pointed and sometimes shod with iron, or there is a stone at the end which makes a furrow in the earth; whilst the horizontal front part is fastened by an osier band to a yoke, which rests on the necks of the oxen, and is harnessed on to them by another osier band. The clods of earth are crushed with short clubs; then the seed is sown and the water led into the fields in little ditches and furrows which are made by the aid of a wooden shovel, the blade of which is fastened on to the handle with osier bands.

The most important species of grain are rye, wheat, horsebeans, peas, and millet. In a few places lucerne is grown, and a little cotton, which does not, however, thrive well here. The rye is sown in June; the other grain in April. The harvest is in September.

A VAKHAN CARRYING CORN HOME FROM THE FIELD

The corn is cut with a sickle and bound in sheaves, which are carried home on the backs of men or donkeys. To be able to carry several sheaves at a time, they have a board on to which a stick is fastened with strings. The sheaves are put on the board in a heap, and are fastened by the strings on to the board, betweeen the board and the stick. On the board are loops made of willow into which the man puts his arms so that the burden rests on his back. In September these little wandering loads of corn are seen everywhere on the terraces being brought home to the kislaks, where they are piled in stacks beside the house or on its roof, with the aid of a wooden fork formed by a branch.

Immediately after the harvest is over, the corn is thrashed by the aid of oxen which, for this purpose, are generally tied together, four in number, by their heads, with a cord which

is fastened to a pole. The corn is strewn on the ground round the upright pole, and the oxen are chased round the pole by a small and generally naked boy, whereby the corn is thrashed under their hoofs.

The corn, when it is thrashed, is piled up and cleaned of chaff by being thrown up into the air on a wooden shovel so that the wind parts the light chaff from the grain ; it is then stored in the store-rooms by the hearth or in the granaries outside the house. Hay and straw are always heaped on to the roofs of the houses, partly to make the houses warmer, and partly so as not to be a temptation to the cattle, which are kept outside as long as possible in order to save the winter supply of provender.

During the winter the natives live on the supplies that they have stored during the summer, and do no work except tending the cattle and putting their houses and agricultural implements in repair ; sometimes they have a little hunting.

The domestic animals are small black and grey donkeys, some very nice persevering and good-tempered animals, employed both for riding and as beasts of burden. When I passed from Langarkish to Khorok the first time in 1896, there were no horses to be seen. But of late years the province has made much progress under Russian protection, and now the little horses of Kirghiz and Badakhshan have been imported. These horses are small, persevering, sagacious, and well adapted to mountain use, and they are highly prized by the people. To possess a horse of one's own is one of the heart-felt desires of the Vakhans and Garans.

As far as I could make out, there were two races of oxen —both small. One kind is somewhat smaller and more slender than our ordinary cow, with pointed, short, slightly curved, forward-bending horns. The other kind is a crippled

dwarfed race of cattle with more strongly curved horns. Like European cattle, they are of different colours. They produce but little milk. The yak-ox (Kutas Kirghizian), or "grunting ox" as it is called, because it grunts incessantly while moving about, is found in great numbers domesticated by the Kirghiz in Pamir; but they are nowhere to be seen in the Upper Pandsh valley. An Aksakal in Langarkish possessed a few which he bought from the Kirghiz, but these were the only ones in all these parts, and the natives stated everywhere that these cattle have never been kept in Vakhan or Garan.

There were also two races of sheep and goats which are kept in great numbers by these people—one somewhat smaller than our European sheep, and one of quite a dwarf race. Their wool is exceedingly fine.

In Vakhan, both races of cattle, of sheep, and of goats were found, the larger race was, however, prevalent; but in Garan almost all the cattle and flocks belonged to the dwarf race. The full-grown oxen were often not larger than an ordinary European calf; and the full-grown sheep and goats no larger than lambs of two or three months old in Denmark. I had already noticed this on my first expedition; and when on my arrival here with the second expedition I pointed out the diminutive sheep and goats to my companions, they exclaimed: "But they are lambs and kids!" However, they soon discovered that other still smaller toy-like animals were sucking those which they had taken to be lambs and kids.

The dwarf race, or crippled race, which is the common race met with in Garan and parts of Shugnan—which also is seen in Vakhan—is really wonderfully small. During our winter stay in Khorok, on the Gund, we could as a rule get

no other cattle for food. One sheep was just sufficient to make a meal for one man. Only very few specimens of the fat-tailed sheep are found in these parts, and these have been bought from the Kirghiz in Pamir. Of other domestic animals, there is a small species of fowl, the eggs of which are of the size of a large pigeon's egg; there is a snappish, sagacious watch-dog of a large Scotch collie type; and there is a small greyhound of a reddish brown colour which was especially used for starting game. There is, moreover, the tiger-coloured cat, much like our European cat.

These people have much taste for gardening; each house has its little flower garden, vegetable garden, and orchard, which are often carefully tended. Fruits are of no slight value for food; and the natives are very fond of flowers. It is thus a common experience that the stranger, on arriving at their village, has bouquets of flowers presented to him as a welcome.

When we camped in these parts during the summer, either the Aksakal on the Kasi of the town brought fresh flowers into our tents nearly every morning.

The gardens ("gulistan") are situate near the houses, and are irrigated by small channels which lead the water to the fruit trees, vegetables, and flower beds. From these channels the natives generally fetch their drinking water, which, as a rule, is beautifully fresh and clear. Yet one should be careful in drinking the water unboiled, as in some places it causes a tumour, resembling bronchocele, on the neck from the chin down on the breast. There was no sign of this disease in Vakhan, Ishkashim, or Garan, but higher up, in the valleys of western Pamir, in Darwas and Karategin, it abounded. The same disease is also found in

Turkestan, and is supposed to be a consequence of drinking the water unboiled. This disease proves fatal in the course of a few years, and according to the Russian physicians, there is no positively effective medicine known to combat it.

In Vakhan, the apricot is the most important fruit tree, and in August these trees are covered with beautiful fruit, which are partly eaten straight off the tree, and partly dried on the flat roofs as winter provisions.

Moreover, there is especially found in Garan, as well as in Vakhan, a great many white mulberry trees, the fruit of which is gathered, dried, and ground into flour. This flour made of mulberries takes the place of sugar. There are some pear and apple trees, the fruit of which is not good, walnut trees, and, in some places in Garan, peaches. On the other hand, grapes, figs, and almonds are not found in these parts; they do not make their appearance until we reach the north of Roshan, and further north still.

No vegetables are found except melons and pumpkins.

There is one plant that is never wanting in the gardens of the natives—the opium poppy ("kuknar"). This plant is very carefully tended, as many are addicted to the smoking of opium. Before the capsules get ripe, an incision is made into them with a knife, and the juice which comes out coagulates into a kind of resin which is scraped off and kneaded together into a dough ("afiun"). This dough is burned over a lamp, whilst several persons lie round the lamp and inhale the smoke through long tubes until the sleep or stupor commences. In Vakhan only the poor people smoke opium; it was looked down upon as a vice by the well-to-do. In Shugnan and Garan, on the contrary, the smoking of opium seemed to be common to all classes.

The opium-smoker is easily told by his sallow face, dim eyes, and flaccid body. Many become quite imbecile from this pernicious habit. We always had to make sure before engaging a native whether he were an opium-smoker or not.

One more sensuous pleasure was derived from the ripe opium capsules by grinding them into flour after removing the seeds. This flour is then mixed with water and drunk —the water turning yellow when mixed with the flour.

Another intoxicating liquor is made from the poisonous thorn-apple (" tâtallá "), which in a few places is cultivated in the gardens. This drink, however, is not common.

The flowering plants generally found in the gardens were hollyhocks, hemp, mallow, marigolds, yellow carnations. fox-tail, and yellow tobacco. Flowers are only employed for the beautifying of the gardens, and not in the houses. The caps or turbans of the natives are, however, often adorned with flowers stuck into them. The tobacco plant is mostly employed for decorative purposes ; indeed, tobacco smoking is but little known. Tobacco pipes are unknown ; when tobacco is smoked it is done in the following primitive way : A hole is dug in the earth, and filled with tobacco leaves, generally mixed with dry apricot leaves, some straws are stuck slantingly into the hole, and several persons lie flat on the ground and suck at these straws, whilst the smoke hangs like a cloud round their heads.

ARTICLES OF FOOD

During the summer, when the cattle are taken up to the mountain pastures, the meals of the people consist for the greater part of milk and milk dishes. Sometimes a sheep or goat is killed ; but the oxen are not generally killed until

they are decrepit. Goat's meat is considered a very poor dish ; mutton is much more highly appreciated. The natives are very fond of fat things, and will frequently be seen drinking with great relish a cup of a decoction of fat.

As a rule it may be said that the lower a people stand the more fond they are of fat and fatty dishes. One of their favourite dishes, which according to the European idea smells and tastes horrible, is a mixture of milk and fat and flour ("shirbad"). Curdled milk and millet-porridge ("bakala"), are, moreover, amongst their favourite dishes in the season when the cattle are at the mountain pastures ("ailâk"). The millet is ground and boiled in water ; it is also sometimes eaten dry, like flour, heated in a pan, but it is said that this dish, when eaten too frequently, causes St. Vitus's dance. The bread is baked of the flour of wheat, or rye, or pea. As a rule it is ground in a turbine mill by a man whose only occupation is that of a miller. The people who live far from such a mill use a kind of mortar made of an excavated stone in which they grind the corn with a round one.

The numerous mountain streams yield an abundant water power, and along such streams there will often be five or six water mills all in a row, in idyllic clefts covered with trees and bushes.

The mill is a small clay hut built on a bridge across the stream. A small wooden turbine, driven round by the water, makes two roughly hewn flat stones rub against each other. In spite of the rude primitiveness of the process, the flour is not at all badly ground, even from a European point of view.

Three different kinds of bread are made. One is a small round cake made of a mixture of pea-flour and mulberry-flour. This is baked in an earthenware dish, and has often

an excellent flavour. Another kind is a large flat biscuit of wheat meal. The most ordinary bread is in the form of an immense, thin pancake-shaped loaf. These loaves the natives carry with them when travelling, rolled up in the cloths ("lungi") which they wear round their waists. They are baked in a special oven made of a small clay vault with a hole at the top, not unlike the cupola of a mosque. The ovens are always built outside the house, and the bread is baked thus: the dough is placed in thin layers on the outside of the clay vault, which is then heated inside —the hole at the top of the vault is the vent. During the summer, at the mountain pastures, the natives often content themselves with slices of dough kneaded together, and baked on the ground near a pile of faggots.

Bread is not, as with us, eaten with meat or other things, but is eaten by itself, and generally eaten hot. It is quite an ordinary custom to invite neighbours to a bread feast, where the dishes consist only of different kinds of bread, the host himself breaking the loaves, and offering them to his guests.

The dish called Pillau, which is known all over Central Asia, is also eaten in these parts, and is considered a great delicacy. It is made of cooked rice, pieces of meat and fat mixed with currants, carrots or quinces, and pepper. The rice is imported from Badakhshan. Tea has been known here from time immemorial. It was, according to the natives and to tradition, brought to these parts by Chinese merchants. It must be remembered that the Chinese once possessed High Pamir; and at the lake of Yashilkul we found remnants of Chinese fortresses, the stone foundations of which were adorned with Chinese ornaments.

It is only a small part of the population, be it said,

that can indulge in this drink, of which they are very fond.

The people do not avail themselves much of the fishing in the Pandsh, though carp abound in its waters. Fish is looked upon as a poor dish, but it is sometimes eaten fried or boiled, being caught in osier baskets turned upside down, a stick being fastened to the bottom of the basket when it is sunk into the river. Sometimes they are caught in small traps made of willow.

It is often very difficult for the natives to procure firewood in the parts where trees are so scarce, and the poor people generally only heat the huts a little whilst the meals are being prepared, or when they have visitors. At other times they wrap themselves up in their fur cloaks and keep themselves as warm as they can in a heap of straw or hay on the platform in the hearth-room.

To make up for this lack of wood the manure is gathered during the autumn in a heap, together with the household leavings and remnants of fruit, and all this is kneaded with the hands and made into cakes, which are stuck on to the roof and walls of the house to dry, and are then kept in store for winter use. It can easily be imagined that a house covered with these fuel cakes does not look very attractive, and has a strangely curious appearance.

There can only be any real home life amongst the natives in the villages during the winter. Spring and summer and autumn see them busy in the fields, sowing, repairing the water channels, tending the cattle, harvesting, and procuring provisions for the winter—indeed, there is no time left to them for any kind of recreation. During the winter, however, the people, especially the men, do hardly any work. They lounge about in the village to hear and tell news, take

their meals together, marry, and feast as much as the provisions gathered during the summer will allow. It often happens, unfortunately, that the store of provisions comes to an end too early both for man and beast if the cold weather lasts long, and many cattle perish for lack of food.

During the winter, wolves and panthers come right down to the kislaks, and even break into the open byres and attack the domestic animals. The natives in their wanderings are often stopped by packs of wolves, and the children are very much afraid of being out alone during the winter owing to the wild beasts. During the winter nights there is a perpetual howling of wolves and jackals round about the kislaks.

Wild birds are scarce. Fowls are rather numerous; of these there are two species—one very diminutive and of the grey colour of sparrows; the other a larger species, the colour of which is brown with a very pretty pattern on the wings. Both are delicious to eat. These people often put the larger kind in cages as ornamental pets, just as they do in Turkestan. Of other birds, there are rather large numbers of pigeons which have their nests in the rocks, a small grey duck with a blue mark on the wings, and a variety of small and large falcons. When we add to these the magpie, which is found everywhere in the valleys of Pamir, the black crow, and some small birds that feed on seeds and insects, we exhaust the list of the birds of this region.

Mice and rats are so numerous in the houses as to be a serious nuisance. On the mountain terraces, even at considerable altitudes, there are numbers of snakes. On the terraces in Garan, at a height of some 2700 metres, there are many, of which I estimated the longest to be about 69 centimetres. They are of a greyish colour, and,

according to the natives, harmless. Lizards run about the rocks in large numbers, amongst them a pretty little specimen with red and yellow spots on the head. A disagreeable animal which is very numerously represented at Vakhan and Garan is the scorpion, the venomous bite of which is much dreaded. They are here found as large as twelve and fourteen centimetres in length, and in some places they were in such numbers that we had to clear the place of them with a broom before pitching our tents. Poisonous spiders are also found; and in a few places, by the Pandsh and its tributaries, mosquitoes swarmed.

During the winter some of the natives pass the time in hunting, mostly in the way of trapping. Both birds and the larger animals are caught in traps. The children amuse themselves by setting miniature traps for little birds. Traps are made of strong flexible branches, like bows. Two such bows, provided with wooden or bone spikes, are placed together on a board, and by the aid of twisted ropes catch hold of the legs of the animal which is enticed into the trap by a piece of meat or some corn. Sometimes carcases are placed on the snow, and the animals which are enticed to the place by this means are ambushed and killed with a matchlock. In a few places, though this is rare, falcons, of which there are large numbers in the Upper Pandsh valley, are employed for the hunting of birds. In some places the people have iron traps, of the European kind imported from Afghanistan.

Of larger game, there is in the mountains of Pamir, near the Pandsh, the large wild sheep called kiyik, which resembles an immense ibex, of a greyish colour, with a black stripe down the back. Its size is that of an ordinary stag; its horns are large and bent backwards like the horns of the

ibex. The flesh, which has a sweet taste, and the skin, with its thick wool, are highly prized by the natives. Its horns are used to decorate the graves of holy men and in all other sanctuaries.

The Ovis Poli, or large Pamir wild sheep, does not come so far south as this—it attains at times to the size of a small Norwegian horse, has immense twisted horns like a ram, and is of the same colour as the kiyik.

In the mountains between the Pandsh and the Shakdarra we find a small brownish grey bear, a large number of almost yellow wolves with short tails and of smaller size than the European or Siberian wolf, a small form of a very light colour with red stripes down the back and a thick bushy tail and very fine fur, also a small species of hare. The long-haired, light-grey panther with black spots is very common here, and is much hunted. One specimen had a height of 70 centimetres, was 130 centimetres from snout to base of tail, and had a tail a metre long. There are besides these animals numbers of jackals.

When marching across the snow during the winter, and when engaged in hunting, both the Tadjiks and the Kirghiz wear a kind of snow-shoe plaited from osier bands, which is tied on to the foot to prevent them from sinking into the snow. In spite of the difficulty in tramping in these troublesome shoes, on which they can only get along by a kind of swinging motion, they will cover twenty to twenty-five kilometres at a time across the snow fields.

CHAPTER VII

Song, Music, and the Dance

THREE AKSAKALS FROM GARAN LISTENING TO THEIR OWN VOICES IN THE PHONOGRAPH OF THE EXPEDITION

THESE people are earnest and severe, a consequence of their hard struggle for very existence; they are rarely heard to laugh or sing, yet they are not devoid of taste both for vocal and instrumental music. They never sing in the open air during the summer; but in winter, at their parties and feasts, they exhibit their musical talents in the house. When they become enthusiastic their monotonous singing resembles the howling of a dog, but mainly it is a melancholy humming —as they accompany their song the while on guitars and tambourines and sometimes flutes.

The professional musician is unknown; but in the villages there are always some people who can play one of the three instruments, and be hired as fiddlers on festive occasions. In the house of every well-to-do family there is always a guitar and a tambourine. The musicians generally make their own instruments during the winter. The guitar ("ribâb") is hollowed out of a piece of apricot wood, which is very hard—it resembles a violin, the cover of which consists of a stretched skin—it has four to five strings of gut and a bridge and screws just like a violin, but is played like a guitar. The tambourine ("dârya") is made of wood, also covered with a stretched skin, and is used like the European tambourine for accompanying the ribâb (or guitar), or during the dance. The flute ("naï") is made of wood, like a piccolo flute without keys.

Dancing ("rakhâs") is only performed by men. They come forward one at a time, and make gestures with the arms, bending the body and tramping and stamping, whilst they now and again whirl round, often at the same time playing on the tambourine. The dancing is done to the music of guitar and tambourine, or to the clapping of hands by the onlookers. It is rather obscene.

The greatest festivals take place at marriages, and when a son has been born. These festivals are always accompanied with dance and music.

CHAPTER VIII

Marriage—Children and courtesy

MOST likely as a consequence of their busy life during the summer, marriages always take place in winter.

As the official religion is Mahometan, each man is allowed to have four wives; but the men of this people seldom avail themselves of this permission, as they cannot support so many. Polygamy is also allowed in the religion of the Parsees, and concubines are permitted. Some of the men have two wives, but most have only one. Most married women must work hard in this region; as a rule they have to take charge both of the house and the children, and sometimes tend the cattle; and they have to take a part in all the work in the fields, whilst the husband often only lounges about. However, they seem to have a greater amount of personal liberty than is general in Mahometan countries. The husband as a rule does not decide any important step without asking the advice of his wife; and we often saw the women meddle in their husbands' affairs in a way that could not be misunderstood. If we were buying cattle from a man, the wife often came to help him to fix the price; and when a quarrel has arisen amongst the men in a village, it has often happened that some of them would be fetched home by their wives—nay, the women did not shrink from interfering in a fight with sticks.

The young women were often very pretty, and would have been more so if their fine Iranian features had not always been covered with dirt. But they become old very early in life owing to early marriage, hard work, and uncleanliness. Often in the early twenties they look like old hags. They are never veiled ; but the young women always rush into the houses on the arrival of strange men, or, if they are in the fields, they lie down and cover their heads until the stranger has passed by.

The wife is always bought ; marriage takes place without any regard to social position, and, with the exception of brothers and sisters, relationship is no hindrance. Whilst the son of a rich man often marries very early in life, the poor man's son must often remain a bachelor. As it is very costly to buy a wife, it is considered very grand to have several wives, and on the other hand the man who has none is not considered of much account.

Rape of women therefore often takes place. It happened several times during our stay in these provinces. A few years ago part of the tribute to the liege lords of Shugnan, Badakhshan, or Kabul consisted of a certain number of young women.

Marriages take place very early, often between children. When the marriage is consummated the girl's hair is plaited in two plaits. A young woman is more valuable than an older one, and it therefore depends on the father's means whether his son will get an older or a younger wife. It thus sometimes happens that a boy of twelve years will get for his first wife a woman of forty, perhaps a widow. The sum is always paid down—in cattle and cloth. One Aksakal thus paid ten head of cattle for a wife, another ten sheep, a third eight cows, a fourth two donkeys, and so on.

When a man wants a wife for his son, he sends two men to one of his acquaintances who has a daughter who would be a suitable match for his son, and the price is then fixed in the presence of the Kasi and the Aksakal. Then the business is determined, the girl's consent not being asked. Twenty days after the price is fixed the wedding takes place, during which time the bride arranges her primitive trousseau and makes other preparations.

Accompanied by many attendants on horseback, on donkeys, or on foot, the bridegroom and his father go to the bride's house. In front of the procession a singing howling man prances about; then follow four tambourine players on foot, and after these comes the bridegroom on horseback or on a donkey, in his gayest attire. He is followed by his attendants, who utter wild howls and fire off their matchlocks into the air. In the house of the bride is arranged a banquet for the guests, and the bride and bridegroom are allowed to stay alone in a separate room. It should be remarked in passing that kisses ("bhah") and caresses are given in the European manner; this is, or should be, the first time that they see each other, but most likely they have already secretly made each other's acquaintance.

During the meal the bride and bridegroom appear before the guests. The bride is veiled. A Mullah and the Kasi read something out of the Koran in Arabic, which is generally not understood either by themselves or the others; the Mullah then asks the girl if she will have the man who has been chosen for her, and she does not dare to refuse.

The banquet, which consists of mutton, dishes of fat, bread, and dried fruits, is accompanied by the music of

tambourines, guitars, or flutes, until towards evening, when the bridegroom and his attendants leave the house.

The next day a similar procession is formed. It is the bride's father taking his daughter to her husband. The bride, who rides a horse or donkey, is dressed in a white robe which completely covers her. Her head is generally covered with a red handkerchief. She rides behind the tambourine players, and her horse is led by one of her relations. As on the day before, a banquet again takes place, but at the bridegroom's house, and the couple are again left alone in a separate room.

On this second day, if the people possess horses, they have games ("At Tamasha") like the Kirghiz. A sheep or goat being tied to a pole in the field, several horsemen gallop past on horseback and fire at the animal with their matchlocks. The one who kills it must lift it on his horse and gallop a certain number of times between two points without the other horsemen being able to get it away from him. If he succeeds, he is the victor, and wins a prize of cloth, which is presented by the father of the bridegroom. It is needless to say that it is only the well-to-do who can afford this sport.

The time is passed with the aid of several meals, music and dance; and the feasting often lasts till far into the night. The young couple are then considered husband and wife.

The day after the wedding, four elderly women come to the house of the young couple to bear witness that the bride was a virgin before the wedding. If this is not the case, the husband can immediately demand a divorce. They then plait her hair in two plaits as a sign that she is a wife. Most young couples remain at the house of the

parents of the husband, and serve them; but if they are able to do so they get a home of their own.

In these provinces there is a very strange law, that a man who has been away several years on a journey to other countries, if he has rich relatives, shall have the right to demand that they procure him a wife.

The natives seem to live happily with their wives, and the connubial code of morality is high.

A married woman was staying at a house in the kislak of Mishus, with her blind brother, whilst her husband was away. Another Tadjik came into the house and ravished her. Her screams called other women to the house; but they failed to prevent the man from getting away. The young woman asked, weeping: "How can I now face my husband when he comes home?" She then went down to the river, put all her clothes on a stone, cut off the braids of her hair, placing them beside her clothes, threw herself into the torrent, and was drowned.

If a man lie with another man's wife with her consent, any one has a right to kill them both. If it be done against her will, and this can be proved, the man is punished with flogging and fines.

Divorce is said to be very rare, yet it is not difficult to obtain. The reason is probably that it is so costly to get another wife. If the husband beat the wife, or if he cannot support her, she can demand a divorce. The case is always judged by the Kasi. If a man demand a divorce, and it be not by reason of adultery, he must pay the woman a certain number of cattle—this number being fixed by the Kasi.

When a husband dies, his widow can demand, after the lapse of four months and ten days, that the brother of her late husband, or if there be no brother, then his nearest

male relation, shall marry her, if she does not prefer to marry some other man. When she enters into a new marriage, if she has had children, these children always inherit all their dead father's possessions, the boys' inheritance being double that of the girls'. If she prefer to remain single she inherits all. When a man leaves more wives, the one who marries again gets nothing; but if she has had any children they inherit the part belonging to her, as all the widowed wives divide the inheritance equally. Orphans are maintained by the nearest relations; but they get no inheritance from the family that supports them.

CHILDREN AND COURTESY

The natives are very fond of children, who are much spoiled, especially by the father, and are considered as a gift from God—the more children they get the greater their bliss. A childless marriage is looked upon as a punishment from God. Boys are especially desired; and when a boy is born in the kislak all the neighbours rush to the house to congratulate the parents; there is feasting, with music of guitar and tambourine, whilst volleys are fired outside the house.

An old woman assists at the birth—a kind of midwife, of whom there is one in every kislak. Only women are allowed to be present at birth; the father is not allowed into the room until the child is born. He then receives in his house the congratulations of the neighbours—but if the child is a girl there is no banquet, nor are volleys fired.

If a child be still-born, it is at once buried.

For three days the new-born child is nourished on fat; then the mother nurses it until its third year—if she has no other child in the meantime.

Boys are always circumcised, at the age of four, with a knife by an old practised man, and the wound smeared with burnt wadding or felt. Eunuchs are not made amongst these peoples.

When the child has lived three days on fat, it receives its name, which is given by its father in the presence of a Mullah, if there be one in the neighbourhood. On this occasion a banquet is given. Some of the most common names given to boys are: Ali, Mahommad, Aman, Tana, Salil, Tamasha, Yusuf, Ramasha, Shaker; and to girls: Kurban, Begin, Sadji, Damâh, Dawlat-Mâh, Ashurmâh, Niashbibi, Madian, and Suleika.

The little children are the only members of the family who sleep in a kind of bed ("gahvarra"); all the others sleep in their clothes on skins, rugs, straw, or hay. The children's bed is, like the beds in Turkestan, Bokhara and Khiva, a small oblong wooden box on four legs. A kind of awning is made with some wooden hoops, covered with cloth, to keep the sun and wind off the child when it stands outside the house. Between the hoops is a cross-bar which forms a handle to carry the cradle or bed, which is painted as a rule in bright red and green colours. The bedclothes are rags and pieces of cloth and skin. For the removal of the urine there is, as with the Kirghiz, a hole in the bed, through which, in the case of boys, the urine is conducted by the aid of a tube made out of a hollow bone, which is placed on the sexual organ.

During their youth the children do odd jobs of a small kind about the house—tend the cattle and so on; and, if possible, they attend a kind of school, which is generally only temporary, and kept by a wandering Mullah. In the larger kislaks there are also professional teachers who can read and

THREE BOYS FROM GARAN

write. Mullah is a title which, in the Mahometan countries of Central Asia, is bestowed on a man when he can read the language of the country, and Mirza is the title of a man who can both read and write. These titles do not in the least mean that the man belongs to the clergy—this, of course, he cannot do without certain qualifications.

BOY FROM VAKHAN. A SON OF THE KASI OF NAMATGUT

In these schools the children learn to read the language of the country, sometimes also a little writing and arithmetic, and the recital of some Mahometan prayers by rote. The language the children learn to read and write is Shugnan (the Tadjik). Many children, however, get no other instruction than what their parents can give them, and, in consequence, only speak Vakhan. In some houses little wooden slates hang on the walls with the Persian alphabet for the instruction of the children, and as a useful memorandum for the adults. If there be a school in the kislak or in its neighbourhood, both boys and girls are sent there at the age of seven or eight. If a man does not send his children to school or to the wandering Mullah, the elders of the town remonstrate with him in the matter ; but he is quite independent, and can do as he likes in this respect.

The poor people often send their boys into the service of

the rich; but never the girls. As soon as the children are able to run about and take care of themselves they are allowed to do so. During the summer the boys as a rule go about quite naked, and flock together on the flat roofs or in the gardens to play. One of their games, Bushull (Shugnan) or Shitik (Vakhan), is played with bone pegs, which they throw into the air, and the winner is he whose peg falls so that it stands on end in the ground. Another game, Djigând (Shugnan), is played with pins on which there is a hook. The children, dividing into two sides, fling the pins from one party to the other, who try and catch them on sticks by the hooks.

The children and young people are remarkable for the great modesty of their conduct towards their parents and elders. They are rarely heard to meddle in the conversation of their elders; and when the grown-up people go to their meals the children always keep at a respectful distance. When a son receives an order from his father he always bows to him. It may be said that implicit obedience and respect is common both in the family and the community. Great respect is always paid to old people, and each old white-beard is called Bâbâ (grandfather).

The ordinary salutation of the natives to their superiors consists in crossing the hands over the breast and bowing, after which both hands are drawn down past the face, one after the other. If they want to show an exceptional respect they kneel down on the ground. The Vakhans salute their superiors by placing both hands on the forehead and bowing.

They salute their equals by pressing both hands together, and kissing their fingers to them; and when saluting a very dear friend they touch him under his chin with one hand

CHILDREN FROM VAKHAN

and then kiss the hand which has touched him—sometimes they kiss both his hands.

If a man of quality comes to a kislak, whether he be a foreigner or a native, he is always received outside the kislak by a deputation of the men of the town, headed by the Kasi and Aksakal and the elders, who welcome him with a Salam Aleikum. They also bring him gifts consisting of bread, and fruit, and eggs, and the like. Whether he be foreigner or Mussulman, he is entertained free for three or four days, but if he remain longer he has to pay or work for his food.

CHAPTER IX

The Administration—Punishment—Caśte—Slavery—Coins—Weights and measures—Commerce

IN these provinces the customs are most patriarchal. Just as the father is the unrestricted master of the family, the Aksakal (chief magistrate of the village) has the executive power in the village, whilst the Kasi is the judge—all under the rule of their changing sovereign princes.

The Aksakal has an assistant, Harbâb, which means "*in every way.*" The Harbâb has the responsibility of seeing that strangers who come into the town get what they need for their support.

For all minor crimes and offences the Kasi of the village pronounces the sentence, which is executed by a person commanded to do so by the Aksakal. These punishments generally consist of fines and floggings; more severe punishments can only be executed by permission of former sub-princes under the Emir of Afghanistan, and capital punishment only by the Emir of Afghanistan.

Slight crimes are often very severely punished. Thus a Kasi told us that a man who confessed a theft, or was caught in the act, was flogged the first or second time, and the third time his eyes were put out and his hands cut off.

If a man, accused of theft, deny his guilt, he must place his hands on the Koran and swear that he is innocent by

his own death and the death of his wife and children and cattle.

If a man kill another man, a sentence of death is pronounced by the Kasi; and when the sentence has been ratified by the prince of the province the punishment is executed with a knife by an executioner ("djalât"). If the relations of the slain man demand it, the prisoner may be stoned to death or killed by the axe of a man appointed to this office ("quâtil"). If the family of the man that was killed agree, the accused may free himself by paying a large fine.

During the time of the former Shahs or Mires, caste existed, so that all offices were inherited, and the poor man, whatever his talents, was as a rule forced to remain in the same social position which his father had occupied. There is still left a remnant of this division into castes, and the descendants of the former officials, who, as a rule add the title Beg to their name, are the only ones who can occupy the leading positions in the villages. These people all employ the Shugnan (Tadjik) language, but they also speak Vakhan.

Until the middle of the last century slavery existed throughout this country. Each Kasi and Aksakal had both male and female slaves ("k'gälâm"). The slaves were sold and bought. The Siaposh generally provided them with these slaves, whom they robbed from the neighbouring districts, especially from Chitral and Kundut. A good male slave was worth about seven pounds. Payment was, as indeed was the case with all other wares, made by barter, for the provinces have never had coin of their own. Yet, as a rule, Afghan money was known here, and Chinese coins were common, brought here by Chinese merchants who from olden time visited the provinces.

For weights and measures, primitive units are employed. A stone of the size of a clenched fist ("gharr") represents the unit pau—a pound; and four paus make one nimkhurd. As a measure of length, the arm's length from the shoulder is employed, called one ghaz.

Commercial intercourse with the outer world is, and has always been, very slight—partly by reason of the secluded situation of the provinces, shut off as they are from civilisation by the most mighty mountains of the world, and partly on account of the poverty of the people. The foreigner—Chinese, Afghan, or Indian merchant—has seldom come to these parts, where he could only expect to get cattle in exchange for his wares, whilst the native for the same reason has been unable to perform long travels in search of commercial adventure. Perhaps this seclusion is one of the reasons why epidemic illnesses are so rare. Yet the healthy mountain climate, at these high altitudes presumably quite devoid of infection, must be considered chiefly responsible for this immunity.

CHAPTER X

Sickness, death, funerals, tombs—Mazars and holy altars

THE natives everywhere look strong and healthy. They are a lean, hardy, muscular people, bearing the stamp both bodily and mentally of the hard struggle for daily bread and of their sportsmanlike climbing of the mountains. Stout jolly people are never met with—the type is a slender, sinewy sportsman of earnest countenance.

These mountain valleys have from time immemorial been famed for their healthiness, and the people live to a hale old age. To this reputation everything bears witness; we met old men walking about, hale and active, at the age of a hundred years—and some few were even a hundred and twenty-five. But I also suspect that the delicate and the fragile die very young, killed by lack of hygiene and of delicate food—the strong alone surviving childhood.

Tuberculous diseases do not seem to exist. A few pock-marked persons proved that small-pox has claimed victims. Diseases of the stomach are common, perhaps owing to the scarcity of salt, which has to be imported from distant parts and is very expensive. It is often used for payment instead of money. Rheumatism and rheumatic affections are rather common in Vakhan, probably due to the perpetual strong western wind, and to the fact that the people rest and sleep

on the ground with little but a rug or some rags of skin to lie on. Weak eyes and headache are easily explained by the perpetual wind, the sun's glare, the sand and dust, the smoky hearth-room, and the utter lack of cleanliness.

In the village of Nut a great many of the people suffered from an illness which took the loathsome form of horrible ulcerating yellowish white sores and tumours, which spread all over the body. This is presumably a form of leprosy. They attribute it to some springs whence the village gets its water, as the people in another part of the village who get their water from a mountain stream do not suffer from this loathsome disease at all. We therefore took samples of the water from these polluted streams, and had them examined upon our return to Denmark; but they were only found to contain salts of natrium, calium, calcium and magnium.

These people know of scarcely any medicines except those which are connected with their religion or superstition. Now and again a wandering "medicine-man" comes from one of the neighbouring provinces of India or Afghanistan with a bag of herbs, which he prescribes quite promiscuously against all ills. The natives also bathe in the hot springs, to which, not without good reason, they attribute a healing influence. I have already touched upon the prayers written upon scraps of paper which are attached to a string and fastened over the part where the disease has its seat, which are procured from Ishans, wandering Mullahs, Dervishes, and Calenders; besides these there are numbers of other superstitious preventions against sickness used by these folk. Thus it is a safeguard against all disease to wear a piece of a bear's heart, or an amulet of a bear's or an eagle's claw. It is as good as a blessing to

carry about the horns of snakes. They believe that snakes with horns are found in the mountains, and they will produce a piece of bone or the old tooth of some animal found on a mountain slope, which they believe to be the horn of a snake! When they are ill they tear a piece off their clothes, touch the suffering place on their body with it, and then place the rag on the grave of some holy man, believing that his spirit will take away the illness. Sometimes they tie this rag to some fantastic-looking tree in a lonely place, believing that the disease will be transplanted into the tree.

Sick people, or those who are in distress, often go to a lonely place, some strangely shaped rock, some mystically formed ravine—some place where there is a good view or a high pass being preferred. Here they build a cairn, either just a pile of stones, or a pile of stones in the shape of a chimney, and then they smear the stones with fat. In Arabia they have this same custom of smearing the holy stones with fat. The rags I spoke of are also placed on these cairns; and the people who afterwards pass such a cairn always add a stone, or decorate them with the horns of the kiyik. These cairns are found all over Pamir, for the Kirghiz nomads have the same custom. To sleep near one of these cairns during the night is very common, as the people think that the place is safe against wicked men or against evil spirits, which play a great part in their life.

When a man is very ill he is often carried by his friends to such a cairn, an old one being preferred, or to the grave of some holy man. If he seems to be at death's door, he is brought to his home where, if possible, he dies out of doors on one of the mud-built platforms outside the

house, to prevent his spirit haunting the house after his death.

When a man is dead, or in the agonies of death, all his relations come to mourn his loss, and prayers are said at the body, and earthenware lamps kept burning. The corpse is washed in hot water, and if the dead be a man his body is dressed in a white costume consisting of three articles of dress, the Sinaposh, the Hajâposh, and the Chaudir—this last garment covering the whole body and being tied together in a knot on the head; a long handkerchief is also tied above the outer garment and round the head. For a woman the white shroud consists of the Pirân (chemise), the Tumbûn (trousers) and the Chaudir (tent)—this last covering the whole body like the man's, and round the head also is wrapped the handkerchief (Chil).

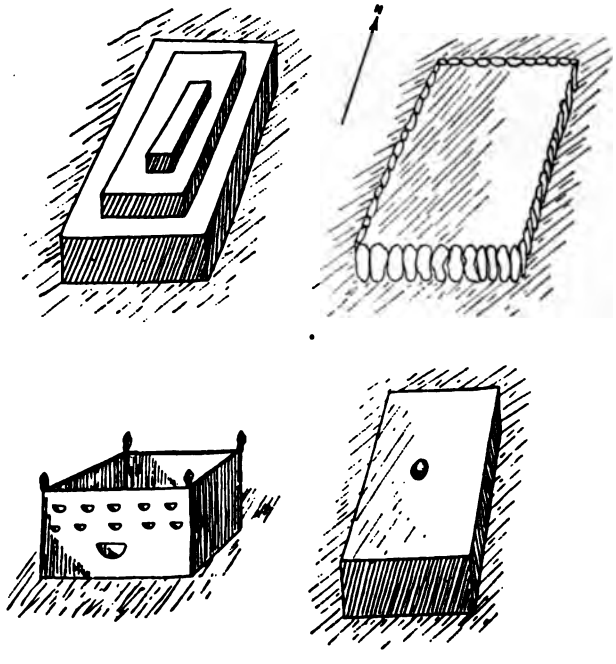
The body, upon a primitive bier of willows, is carried to the grave on the shoulders of four men, and is placed in the tomb so that it is stretched out at full length, the head resting much higher than the body. The head is to the north, and the body is so turned that the eyes are almost towards the west, and, to prevent the body from turning round in the grave, clods of earth and stones are placed on the eastern side of it. A man's grave is the depth of the height of a full-grown man to his waist. A woman's is to the depth that would reach to her neck.

The men, women, and children of the dead man's family are present at the funeral. Prayers are read at the grave, lamps are lighted, and all kneel down numberless times and pass their hands over their faces.

Then the shroud is opened a little, so that the face, hands, and feet shall be free, and the dead be able to arise on the Day of Judgment. If this be omitted, it is said the dead will

bite the shroud asunder, when all his relations and their cattle will die.

When the grave has been filled up, a mound is always made over it, and it is sometimes surrounded by a high stone or clay wall, according to the social standing of the



CLAY AND STONE TOMB ORNAMENTATIONS IN VAKHAN

dead man, his riches, or his holiness. If his piety were remarkable, the grave is especially ornamented.

On all graves there is erected a mound of clay, and sometimes this mound is covered with white stuff, whereon are placed flowers, berries, and corn. On the top of the mound is generally placed a round or rounded stone. I cannot discover whether this stone, which is also often found on graves in other parts of Pamir, has any connection with the

holy black stone at Mecca (the natives themselves could give no reason for its use), but there is just the possibility that this is the case, as it is also found in holy places, as we shall see later on.

On the side of the clay mound facing the east there was always a small rectangular niche wherein earthenware lamps or torches were placed at the festivals. In some places several rectangular mounds were placed in terraces, one above the other. This way of adorning the graves we also find in some places along Amu Darya in Transkaspia, and in Khiva.

The graves of the well-to-do are surrounded by a high stone wall with a small wooden door, yet in most places there was no entrance to the grave; one could only look at it through some crescent-shaped holes in the southern part of the wall. I was told that, on festival days, prayers were said through these holes to the dead.

In many places in Vakhan, Ishkashim, and Garan, the common graves (*gur*, Persian for grave; *guristan*, the burial place) are often grouped round a so-called mazar. The mazar is the grave of a man who by reason of his holy life is looked upon after death as a saint who can intercede with God for the people on earth. This mazar is always adorned in a special way—just in the same way that the Kirghiz in Pamir and the people of Turkestan, Khiva, and Bokhara adorn the graves of their holy men.

As a token of its holiness, masts are raised, on which wave tails of the yak-ox ("tok") or red and white rags, as banners ("alam"); and if the place is especially holy, a metal or earthenware pot ("kobbá") is placed on top of the masts—these vessels are of the same shape as the so-called weeping-pots. The mazar is also adorned with horns of the kiyik

TOMB NEAR LANGARKISH IN VAKHAN

and of oxen, and with strangely shaped stones, and lamps.

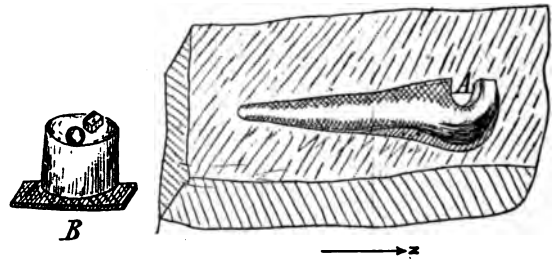
The mazar Khodja Radiab in the kislak of Barshar is such a saint's grave. It consists of a small mud hut, to which leads a small wooden door. The edges of the flat roof are covered with horns of the kiyik, and in the middle

THE MAZAR KHODJA RADIAB IN GARAN

of the roof is a collection of these horns twisted into a figure that makes one think of a crown. In the sepulchral chamber was the usual clay platform to the memory of the dead teacher, the righteous Khodja Radiab, who was said to have lived one hundred years ago; and on top of the platform, which was overlaid with plaster, was a strange figure formed of plaster. I cannot make out whether this figure, the broadest end of which lay just above the head of the saint, where offerings are burnt on festival days in the hook-

formed figure, has any special religious meaning. This was the only one found in South Pamir. It resembled somewhat a sword or staff—it may possibly be meant to represent the staff of a dervish. Beside the platform was placed a wooden log on which stood two little earthenware bowls for torch-lights made of the same brown dough of which the torches used in the houses of Vakhan are made.

In all difficulties, in sickness, poverty, and accidents, or in order to get certain wishes fulfilled, both men and women



THE ORNAMENTATION OF THE SEPULCHRE OF THE MAZAR KHODJA RADIAB

In *A* torches are lighted on state occasions. *B*. Log with two bowls for torches

come to the mazar to pray to the dead saint to intercede for them with Allah. They offer up sacrifices on the grave, of the most extraordinary things—horns, wreaths of apricot kernels, wooden spoons, wooden dishes, and so on—and festivals are often celebrated in the sepulchral chamber itself, when sheep are killed and given to the poor, whilst torches are burnt on the grave.

Besides the mazars there is in almost every kislak a small house of prayer—a little low mud hut with a clay altar, on which stand little bowls or lamps ("chirâk") of earthenware or copper or iron, to hold a wick and fat, as in Turkestan. These bowls or lamps are religiously kept burning by people

when in trouble. Often round black stones or old cow-horns are placed beside the lamps.

In 1896, in a wild romantic narrow ravine in Garan, through which a small mountain stream runs to the Pandsh, I found some ten or eleven little black clay bowls of the size and shape of an ordinary Indian-ink bowl on a terrace in the rocks. They were undoubtedly placed for use in this ravine, for there were remains of the combustible black torch-dough in some of them, and small burnt wooden sticks lay beside them. They were probably employed in some religious rites, in which the fantastic dark ravine, blasted by the frost into weird shapes, undoubtedly played a part. A specimen of these bowls, which I pocketed to examine, is now in the National Museum of Copenhagen. The rest were lost, being packed in a box with other baggage which was lost, being on the horses that fell from a mountain slope in Garan into the Pandsh river.

Just as the most holy place in Garan is at the springs with the altar by the river Garm-chashma Darya, so in Vakhan and Ishkashim an altar, or rather a monument, to Hazreti Ali, seems to be the holy of holies. The natives do not know to which Ali the monument was erected; but there is scarcely a doubt that he was the son-in-law of Mahomet; indeed he plays a greater part in the religion of the Shiites than Mahomet himself.

The Persians who are Shiites always call on the name of Ali when in distress. When they lift a heavy weight, they cry at each pull: "Ali! Ali!" and the Persian pirates on the Caspian likewise shout at each stroke when they pull the oar very hard: "Ali! Ali!"

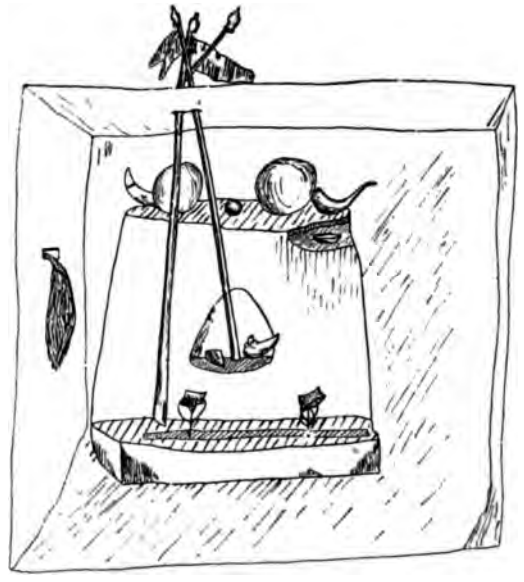
This monument in Vakhan is said to have been erected in

memory of the holy Ali having once rested in this place. It is a small mud-built house about six feet high and nine feet square. The entrance to the house is through a small wooden door, and on each side of this door are the platforms so common in Vakhan, which are used for seats. In the house is a cubical clay altar about three feet high with a base one metre square, chalked all over. On the altar were placed two large rounded black stones of seventeen centimetres diameter; and between these two stones was another like them but smaller, of the size of a hen's egg. Beside the large round stones lay two cow-horns for tooting-horns; round one of these was a copper ring. On a small shelf at the top of the altar was placed a small earthenware bowl which was used as a lamp. On the front of the altar was placed a small lamp in a little triangular niche. It was made out of a hollow stone, and beside it was an iron lamp with a wick ("chirâk"). At the foot of the altar, on a shelf, were placed two candlesticks of copper, or rather two bowls which were fastened by some twisted copper branches to stands, the pointed ends of which were fastened to a piece of wood on the shelf. In a hole in the wall, to the left of the entrance, was a white yak-ox tail, which is a still more holy symbol than a dark one. On staffs, which pass from the altar through a hole in the roof, wave red and white banners over the building, and on the end of these three flagstaffs were the so-called kobbá, two of tinned copper and one of glazed clay. The house was surrounded by a shady well-kept orchard, enclosed by a high stone wall. Judging by the good state of repair of the house from the Vakhan point of view, and the care with which the house was cleaned and the orchard kept, and that an old man was appointed to guard the sanctuary—a Sait, a descendant of the prophet—

THE SANCTUARY OF HAZRETI ALI NEAR NAMATGUT

this must be considered the very holiest place of the Vakhans. Later on we will go into its origin.

The Aksakal of the village told me that at the festivals of the new moon, which are celebrated at the house and in the garden, sheep are killed and eaten on the spot, the lamps are lit on the altars, and all present, men and women,



THE INTERIOR OF HAZRETI ALI WITH THE HOLY ALTAR

stand bowing before the altar, their faces covered with their hands. At each New Year a great festival was celebrated at which a bull was killed. During the festivals they tooted on the cow-horns placed upon the altar.

The people have a story about the round black stones upon the altars to the effect that when Ali now and again dwells in the house he uses them to play at ball. This is probably a legend to show that the stones are a symbol of the strength of the saint. The horns which are placed on mazars and other holy places are a sign of strength.

In Bokhara they say that in some place in Asia there is a religious sect called Lakhé, of which the people have sanctuaries of a kind similar to that of Hazreti Ali, where both men and women come together at the festivals. From the men present there is one chosen, and his eyes being bandaged, he now, whilst blindfolded, chooses one of the

BARROW (KADAMGÂ) IN VAKHAN

women present, and this woman stays in the house twenty-four or twenty-five days, the man visiting her blindfolded every night, and living with her during that time as if she were his wife.

The native Kasi and Aksakal, however, denied that such a custom existed here. I cannot say whether the word of the Kasi and Aksakal can be trusted. It is, however, certain that amongst the so-called Fire-Extinguishers, a sect or

variety of the Parsians, the Lures and Dushikkurds of Persia, it is the custom, in buildings erected for the purpose, to meet once a year, extinguish the holy fire, and mix sexually, regardless of age or position—unmarried women and children not being present at these orgies. The Mahdak sect, and the Avesta religion which had formerly many worshippers in Transoxania, had similar religious orgies. According to a later statement of a Kasi in Garan, it is probable that this custom has also been followed in Vakhan in the sanctuary of Hazreti Ali.

Besides the altar Hazreti Ali, there is still another sanctuary in Vakhan which is held in special awe by the people. This is the so-called "mazar" situated about two hundred metres west of the cleft through which runs the road from Vakhan to Garm-chashma. Both in the valleys of Pamir and in High Pamir amongst the nomads the name mazar is given to the sepulchral chamber or the specially adorned tomb of some righteous or holy man. But this sanctuary was called "mazar," though nobody knew why it was here; it had no special name; the Vakhans only knew that it was very old, and that no one was buried under the monument —a statement most likely correct, as the place for a great distance round about was solid granite. A Beg from Bokhara, Mirza Abdul Kader, who by order of the Emir came with us on both expeditions as interpreter, told us that the sanctuary was not a "mazar" but a "kadamgâ"—*footprint*—erected in memory of a holy man having set foot on this place. This is most probable, as there are many places in Arabia and Transkaspia where such holy footprints have led to the erection of monuments of many different forms. This one was a stone enclosure on a small rock—the stones were heaped up loosely on each other, and on

top of the wall was placed one kiyik horn beside the other. At one end of the enclosure was a cairn ornamented with horns of the kiyik and with staffs, on the top of which was a kobbá of glazed clay. Before entering the enclosure the natives cover their faces with their hands; but they only knew concerning the place that it was good to visit it. Rags, which were hung up, showed that the people appeal here for cures against disease.

CHAPTER XI

The Siaposh and their fortresses in Vakhan

BEFORE we proceed to touch upon the religion of this people, it is necessary to understand the Siaposh, for the remains of their fortresses and carved designs on the rocks, together with the tradition of the Vakhans that the Siaposh of Kafiristan once lived in Vakhan, or rather were masters of the country, compel us to examine what remains of their power, for it is almost certain that their customs, religion, and mode of life have influenced and left more than a trace upon the life of these peoples.

These Siaposh, or Kafirs as they are also called—Kafir meaning *infidel*, being a term commonly employed by Mussulmans about people of other religions—are one of the most interesting tribes in Asia. They are not very much known, as the European explorer has been kept away from their territory, partly on account of their bloodthirstiness and partly on account of Russian and English political interests. Many wonderful reports are abroad about these people—amongst others, they are said to be descendants of the soldiers of Alexander the Great; and their colour is said to be lighter than that of their neighbours, due to the fact, according to the Kafirs, that they had come from the West, from a country far away from Kafiristan.

A few travellers have succeeded in getting a glimpse of their country: the Mullah Nudjib, who was sent there by the British Embassy in Kabul in 1809; Captain Wood, who, in 1840, paid a visit into their mountain valleys; Colonel Lockhart, who, in 1885, went from Chitral to the upper part of the valley of the Bashgul, a tributary of the Chitral river, and stayed there some days; and, finally, Dr. G. S. Robertson, who, in 1893, visited some of the Kafir or Siaposh tribes that live near English territory in North-West India. Much of the following information culled from these explorers I have had the opportunity of getting confirmed, and am able to add some information from the Kasi Khoda Dâ, who paid me a long visit during the wintering of the second Danish Pamir Expedition at Khorok, on the river Gund, in 1898–99. Born in Vakhan, and having studied at the Medressi in Faisabad, he had got an appointment in Badakhshan under the Afghans, but had fled to Russian territory, where he was appointed Kasi in Ishkashim. This man, during his stay in Afghanistan, had often come in contact with the Kafirs, whom he knew well.

The country of Kafiristan, which is about 20,000 square miles, with a population of about 250,000, is situated directly south of the western part of the Hindu Kush, about 35° and 36° lat. N. and 70° and 71° long. E. of Greenwich. The country is chiefly narrow, deep mountain valleys of a north and south direction, watered by mountain streams of rapid current. The river valleys are separated by mountain ranges, which are very difficult of access—spurs from the Hindu Kush towards the south. The passes between the valleys are only devoid of snow a few months of the year, so as to be passable; consequently the intercourse even between the inhabitants of the valleys is comparatively slight. Towards

the north the country is entered partly by the pass of Mandal along the Koksha river to Badakhshan, which is very difficult of access, and partly by the more easy pass of

THE KÂSI KHODA DÂ IN ISHKASHIM

Dora, by way of Sebak to Ishkashim, Vakhan, and Garan. Reckoned from west to east, the most important valleys are the Ramgul and Kulam valleys, through which run some tributary streams of the Kabul river; also the Pressun and Bashgul valleys, with tributaries to the river Chitral.

The valleys are said to be most picturesque; many of them are so narrow and deep that the sun only reaches into them a few hours a day, and during winter they are always in shade, which gives them a most mysterious appearance. The main roads are always along the river banks, and are often very difficult on account of the fragments of rocks. Across the rivers bridges are built in several places, high above the water, very narrow, and with a very low parapet. Sometimes they use, as in the Pandsh valley, a tree hanging out over the river, or the bridge is only a row of poles rammed into the river, over which one has to go very carefully. In the Pressun valley there is said to be a kind of pontoon bridge, and in a few places there are wooden bridges.

In the valleys grow various fruit trees—pomegranates, mulberries, apricot and peach, grapes which the Kafirs make into wine, and horse-chestnuts. On the higher slopes there are wild olives and evergreen oaks, besides forests of fir and cedar, whilst the highest slopes are only covered with grass and moss.

The people live by agriculture, cattle-breeding, and hunting; and they rear bees. Wine, honey, and wax are their most important exports.

The Kafirs, who are of Aryan origin, are divided into several tribes, each with its chief; and the tribes are again divided into families. The tribes have each languages of their own, which, in spite of their common origin (see Trumpp, Burnes, Lister, and Elphinstone), are so unlike each other that, with the exception of the Siaposh proper, one tribe cannot understand the other.

As far as regards the main tribe, the Siaposh, the men are all agile, well-trained sportsmen, wearing black goat-skins with

a leather belt round the waist, in which hangs the indispensable dagger. In other tribes, white woollen garments are considered to be finest. The women, who are said to be very beautiful in youth, are short, and wear a kind of tunic. The hair is dressed in a hornlike way, or is worn hanging down the back under a small white woollen cap. Most of the Kafirs are dark-haired, yet, in some of the tribes, fair and red-haired people are found. Dr. Robertson tells that the Kafirs wear their hair long, hanging down their backs, which gives them a wild look. Our Kasi told that they shaved their heads, with the exception of a small round spot at the top of the head where it grows long, and is plaited. He told me that the men were very ugly; but we must remember that he himself was a Mussulman! He also told me that the women wear a turbanlike head-dress, adorned with various metal plates.

The Kafirs are said to be more intelligent than their neighbours, to be of a reserved character, and to love intrigues and secret plots. Their religion is a kind of Buddhism mixed with many ancient Shamanistic elements. Idolatry, with sacrifices to carved wooden images erected in memory of dead people, within which images are supposed to dwell the spirits of the dead, holy song, dancing ceremonies on the graveyards, all play a great part in their religion.

Imra is the maker of all things, and besides him there are numbers of sub-gods of whom the god of war, Gish, created by Imra, is the most important. Valour is considered the greatest of all virtues, and, in connection with wealth, it is the best recommendation for becoming a chief ("yast"). Until 1896, when their country was occupied by the Emir of Afghanistan, they had maintained their independence of

the neighbouring Mahometan tribes, whom they detest heartily, and whose religion they could never be made to adopt. The Mahometans, and those of their countrymen who had adopted Islam, always suffered heavily from the Kafir love of war—it is said that no Kafir marries until he has killed at least one Mussulman, whose head he carries home as a trophy. This is perhaps exaggeration. To kill their own fellow believers is considered a great sin, as their force against the Mussulmans is thereby diminished. Murderers stay in special sanctuaries, and can return by paying great fines. Each Kafir wears the same number of feathers in his head-dress as the number of Mussulmans he has killed. Their weapons are bows and arrows, daggers, and old matchlocks. Besides the god of war, Gish, they have several other gods who each have their appointed task —thus cows, goats, and sheep have a god or goddess each to themselves. There are numbers of evil spirits, amongst whom a lord-demon and several sub-demons, who closely resemble Angro Mainyus (Ahriman) and his staff in the Zoroastrian religion.

They have a game which is played by throwing balls of iron, and the one who throws the best has to give the others a treat; for they say: "Imra has given him the strong arm, therefore he must give a feast in honour of Imra."

It will be remembered that the altar of Hazreti Ali had stone balls like these.

The wife is always obtained by purchase, and by applying to the girl's father. As a rule a Kafir has several wives. If the husband die, his wives are sold by his relations. All births take place in special houses outside the villages, and the name-giving is carried out by an elderly woman, saying by rote all the names of the babe's ancestors—the name

which is pronounced when the child begins to feed being its name. Our Kasi, Khoda Dâ, told us that the ordinary Kafir names were Darwâh, Kamruk, Shôtôr, and Shurwâh. He also told us that the Kafirs, some years ago, were frequently to be seen in Badakhshan, where they came to trade. They do not bury their dead, but place the bodies in wooden coffins on the hills or mountain slopes, often even near the road beside their houses, where the putrified corpses poison the air. By the coffins of the chiefs is placed a small staff bearing a rag; and often a wooden figure, or stone, is erected by the resting-place of the dead man. They make sacrifices to this figure, and victuals are placed there for the dead, especially by sick members of the family.

It is difficult to determine how far the dominion of these martial Kafirs extended. They were slave-traders and slave-robbers, and much dreaded by their neighbours. It is said that a few names of places in the north-west of Pamir originate from them. Possibly the advance of the Kafirs toward the north-west is connected in some way with the propagation of Buddhism to Khulm and Balkh—or *Balikh*, an old Turkish word which means supreme capital—where Buddhistic drawings and pictures have been found. But if there be any connection between these two things, the Kafirs must have lived in Kafiristan at a much earlier period than the eleventh century, for the collision of the Buddhistic with the Parsee religion at Balkh, the former Mecca of the Avesta people, and in Transoxania, must have come about in the first century. Buddhistic influence, however, may possibly have made itself felt for a long time in these parts. In Bokhara, Buddhistic idols were sold at the fairs during the earliest period of Islam, and not until

the eighth century does Islam seem to have penetrated to the borders of Pamir.

Buddhism seems to have been the first religion which fought against the Parsee faith, and it is most likely that a fight raged in Transoxania and the more accessible parts of Central Asia between the Turans, who brought Buddhism from Tibet, and the Avesta people. Nor is it at all unlikely that the Kafir conquest of their present country took place through a war with the former inhabitants, and that they tried to extend their dominion further to the north of the Hindu Kush.

As the valleys of Pamir can never have had any special material interest owing to their poverty, a consideration which has not been wholly excluded even from religious wars, the Parsee faith has no doubt survived up here to a later period than in any other places. The Zoroastrian religion has undoubtedly existed in Vakhan up to the end of the nineteenth century—of course in a much corrupted form, and with many later additions, which, however, was already the case even two thousand years ago.

While it is very difficult, therefore, to decide whether the Kafirs have really extended their dominion to the north of Pamir and the mountainous parts in the neighbourhood, there is not the slightest doubt that they, not so very long ago, possessed Vakhan, where certain traces of them are found in the fortresses and strongholds they have left behind them. The present generation in Vakhan have from their forefathers the story of the conquest of Vakhan by the Siaposh; indeed, they themselves have known the Siaposh to rob slaves from the province whilst it was under Afghan supremacy. It is said that Captain Wood, without knowing it, met with some of the Siaposh near Ishkashim, where they had their easiest

access to the Upper Pandsh valley through the pass of Ishkashim.

When, in 1896, I passed through Vakhan, I paid a short visit to some ruins of old fortifications which the Vakhans told me were built by the Siaposh—*Siapush* they called them. A closer examination of them was not made until 1898 by the second Danish Pamir Expedition, as I had then neither the time for it nor interpreters.

After a detailed examination of all the fortresses, and a thorough interrogation of the natives, we made sure that almost all the fortresses in Vakhan were built by the Siaposh. They were easily distinguishable from the others, for they were constructed with great military ingenuity and skill, which is in accordance with the tradition of their intelligence and very warlike disposition. Some of the older amongst the Vakhans can remember their grandparents speaking of the Siaposh living here when they were children ; and a comparatively well-instructed Kasi told us that it was at least 300 years since the Siaposh had reigned in Vakhan. Though one cannot attribute too much importance to the numerical statements of the natives, the condition of the fortresses seemed to indicate that they cannot date from a much earlier period. However, they may possibly be 500 to 600 years old, as even walls made of stones dried in the sun will last very long in this dry climate.

Besides the Siaposh fortress spoken of, which was possibly connected with the cave fortress situated about 200 metres east of Varang, there are still some others. These are the large Siaposh fortress of Zengi-bâr at Zunk ; a very large fortification west of Yemchin ; a smaller fort about 1000 metres east of Darshai, at the ravine already spoken about, which is a road to the river Garm-chashma

Darya's upper course; the fortress of Ka'a-Ka, about 1000 metres west of Namatgut, near the Pandsh; a fort on the southern side of the Pandsh, near the river, on the hill at the middle of the pass at Ishkashim; and a smaller fort about seven kilometres north of Nut, on the eastern bank of the Pandsh, in the province of Ishkashim. Here the line of Siaposh forts ceases, and no Siaposh ruins whatever are found further north in the Pandsh valley than this fortified place north of Nut.

All these military constructions are based on the defence of the provinces of Vakhan and Ishkashim, and are built most ingeniously. The fort of Zengi-bâr, from its situation, barred the way against any invasion either from Vakhan or the valley of Pamir Darya. The fortress on the road from Darshai to Garm-chashma Darya barred the passes from Garan. The fortress north of Nut was alike calculated to stop the attacks of the Shugnans and Garans. The main fortress of the Siaposh, Ka'a-Ka, at Namatgut, is built just near the Pandsh, and was most likely so placed to bar the entrance to Vakhan from the south, through the pass of Istragh. It is situate only about twelve kilometres from the pass at Ishkashim, through which the Siaposh themselves poured into Vakhan, so that, in the event of being forced to retreat, they were near the line of retreat by way of Sebak and the Dora or Nuksan passes, or the pass of Istragh, along the river Chitral to Kafiristan.

The possibility that the Siaposh have gone further north along the valley of the Pandsh to Garan, Shugnan, Roshan, and beyond is not excluded by the fact that their fortifications cease at Nut, for they may have been driven back from the north at an earlier period and their fortifications pulled down after their retreat, whilst their large fortifica-

tions in Ishkashim and Vakhan on their line of retreat would enable them to hold their ground in these parts for a long time. In the fort in the pass at Ishkashim they had a kind of fortified *repli* for the garrisons of the forts north of Nut and Ka'a-Ka, which secured their retreat towards the south.

It seems, however, most probable that they advanced no further north than the southern boundary of Garan—the narrow poor ravine, difficult of access, would not tempt them to advance further north—besides, in the pass of Darband, where the valley narrows exceedingly, the northern tribes would be able to defend themselves easily enough to be a match for them. Indeed, they would perhaps be content to conquer the larger and populous valley in Vakhan and Ishkashim, and to settle down therein as the masters of the country.

Not only do the whole system and the skill in choice of the situations for the fortresses in Vakhan bear witness to their high military ingenuity, but the fortresses themselves are based on a carefully made plan, as we shall see by examining the three largest, Zengi-bâr, Yemchin, and Ka'a-Ka.

It is said in Vakhan that Ka'a-Ka was a powerful Siaposh chief, who conquered all Vakhan and Ishkashim, and built many fortresses. His two chief generals were Zengi-bâr and Röndh, or Rang, after whom the fortress at Zunk and the kislak of Rang got their names. In the pass of Darband, south of Barshar, the Tadjiks from Shugnan and Garan are said to have stopped the advancing Siaposh and to have built forts which are now in ruins; later on they attacked the chief Ka'a-Ka, and the tradition is that Hazreti Ali himself descended to earth to head the Tadjiks

against the Siaposh. Ka'a-Ka had to retreat with his whole army through the pass of Ishkashim to Kafiristan. It was in memory of this event that the sanctuary to Hazreti Ali was erected near the destroyed Siaposh fortress of Ka'a-Ka.

This seems to indicate that Islam came to Vakhan after the Siaposh were driven out, when the northern Pamir people of Shugnan, Badakhshan, and Roshan, by force of arms, compelled the Vakhans to adopt their religion. If we go by the story about Hazreti Ali's combat with Ka'a-Ka, it seems to be the Shiite sect which supplanted the Parsee religion in Vakhan, as Ali is the chief prophet of the Shiites, and the recognised successor of the prophet. This agrees with Captain Wood's statement that the Vakhans, during his journey along the southern bank of the Pandsh, at any rate officially belonged to the Shiite sect.

The people of quality amongst the Vakhans—Kasis, Aksakals and greater landowners—form, together with their families, a kind of superior caste. They only speak Shugnan amongst themselves, and the old Vakhan language seems to have degenerated into a peasant-dialect. The lower classes generally can only speak Vakhan.

It is probable that this governing class came into Vakhan with the Shiite Tadjiks coming from the north, and that they kept their dominion over the native Vakhans after the Siaposh were driven out.

THE SIAPOSH FORTRESSES AND CARVINGS ON STONES

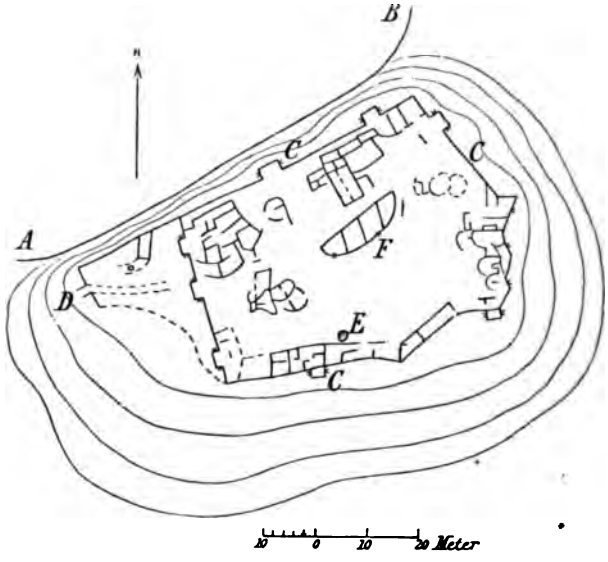
Zengi-bâr is situated about three kilometres from Langar-kish, between that kislak and Zunk, on a high isolated slaty rock about a hundred metres high, and very difficult of access. The rock, judged by the position of the layers,

RUINS OF THE FORTRESS ZENGI-BÂR

looks as if it might have slid down from the mountain slope to the north. The rock falls steeply away on all sides, and in several places its sides are perpendicular as walls. The fortress is built on the upper plateau of this rocky eminence, which has a circumference of some 458 metres, its walls and towers standing right at the sheer edge of the plateau. It dominates the surrounding territory, and it was clearly intended to defend the people against attack from the north-east—from Pamir and Vakhan Darya. It is built exclusively of flat pieces of slate, without any framework; this slate being formerly cemented with mud. The walls and towers, which are still well preserved, in some places rise to a height of seven metres above the plateau and are a metre in thickness. The square towers are provided with loopholes and are ornamented with a belt of stones placed edgewise and running round the entire fortress. All the way round the wall is flanked by twelve main towers, besides some smaller ones, and the walls are thus shaped in accordance with the form of the plateau so that there is not a single place outside the fortress which was not raked from the walls. Inside, along the whole wall, there are remains of buildings with rooms for the garrison, and in these are still well-preserved hearths, and niches in the walls for the storing of household utensils and weapons. In the middle of the fortress, within the line of houses throughout its length along the outer wall, are the remains of a larger building, the walls of which still indicate that they have been coated with plaster, and in which we find the niches so common in Central Asia for the storage of household utensils.

This building is so large that it would hold several hundred people. It was divided into four halls, and was

probably the residence of the chief. In three places in the fortress were found remains of three cisterns of brickwork to hold the water supply, and remnants of vaults built over them showed that they were covered over to hinder the evaporation of the water and to keep out the dust and dirt



GROUND-PLAN OF THE RUINS OF THE SIAPOSH FORTRESS ZENGI-BÁR

A–B. Irrigation channel. *C.* Outer walls and towers. *D.* Ascent to the gate. *E.* Brick cistern. *F.* Ruins of a dwelling, probably the one occupied by the chief.

blown hither by the wind. These covered wells are also found in Bokhara, Khiva, Persia, and the neighbouring lands. Besides this large building for the chief were some smaller ones inside the walls, which presumably were occupied by the garrison with their horses and cattle and provisions. A whole little township was within these walls, and it is most likely that all the Siaposh quartered in this town had their dwelling here. The entrance to the fortress was to the south-west, by an artificial rampart formed by

RUINS OF THE SIAPOSH FORTRESS AT THE VILLAGE OF YEMCHIN

the heaping up of stones and fragments of rocks, and along this rampart a road led to the only gateway of the fortress. This gateway, which was vaulted, is built of a very solid material of large roughly hewn granite blocks—as was the case also with the two towers which defend it. The gateway was shut most likely by strong wooden doors, but of these there is now no trace. Inside the gateway are several houses with numbers of rooms connected by small doors—the plaster on their walls is partly preserved. Several of these rooms seem to have had arched ceilings. They were most likely occupied by a strong force for the defence of the entrance. As in Parthian and Sassanide buildings, so here also, corridors are never found, the rooms opening into each other. The vaults of the buildings seem to have been round, not pointed, as was ordinarily the case everywhere in Central Asia. The roofs, which are all fallen in, or have been removed, were most likely flat and built of beams, with a layer of clay on top, as in other places in Central Asia; but the beams have been removed, either to be employed by the Vakhans for the building of their own houses or for firewood. A watering channel is led past the north-western side of the fortress along the foot of the rock, and an underground passage led from the rampart to the water channel; this passage has now fallen in almost completely. All the walls of the fortress are provided with loopholes constructed in such a way that the garrison were able to shoot downwards as well as along the walls.

The Siaposh fortress at Yemchin is situated about two kilometres west of the kislak of Yemchin, on a mountain slope which is very difficult of access, about 600 metres above the Vakhan valley. One can only reach it by almost

crawling on all fours. The walls of this fortress have the considerable circumference of about 12 kilometres. It is built ingeniously on a terrace that juts from the mountain slope, and is surrounded by two very rapid mountain streams, the deep ravines of which, worn out by their erosion, are some hundred metres deep, forming a natural moat round the mountain fastness. Highest upon the mountain top, where the rivers go past at a distance of only some 200 metres from each other, and where the ground round the banks furthest away from the fortress is quite inaccessible, is the *réduit* of the fortress, which consists of an independent fort, something like Zengi-bâr, with a high wall flanked by towers. From this *réduit* there is a long wall along the western stream right down to the edge of the terrace, where it bends and runs along the edge of the slope to the eastern stream. At the eastern stream, where the ground is easier of access, are two walls, one behind the other, so that the garrison were able to defend themselves behind the second wall in case the first was carried by the enemy; and, in order to further strengthen this wing, an independent fort was built on a small island in the eastern stream. The walls were built so that they could fire upon the whole of the ground in front, and were curved in accordance with the shape of the ground so that they were able to rake it lengthwise. The walls, whereof several were still left to a height of seven or eight metres, had loopholes in two stories, and the towers flanking them, which were of a conical form and ornamented on the outside by zigzag-formed figures, even had three stories of loopholes. These loopholes were all directed downward, and narrower at the outside than at the inside, just like our modern ones. Smaller towers are built here and there at the foot of the larger flanking towers.

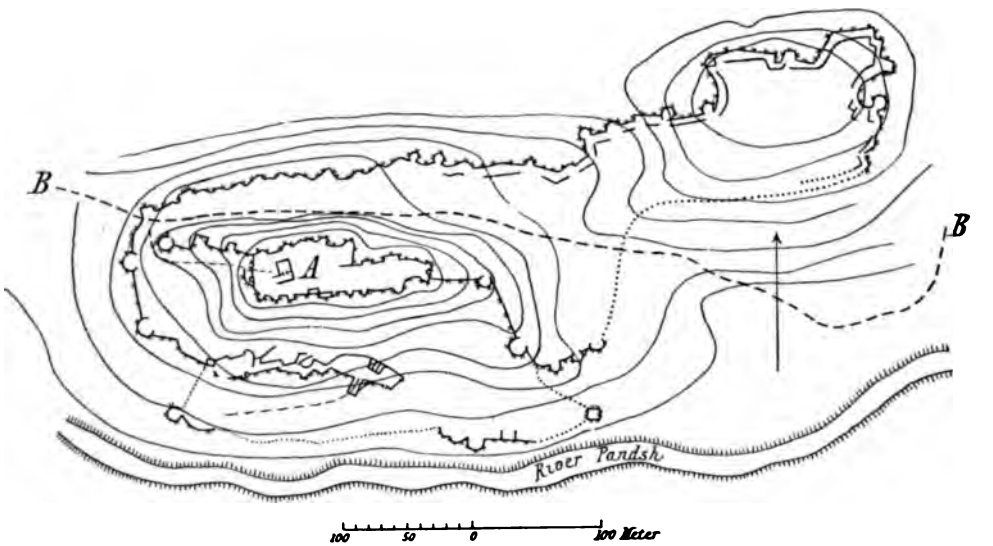
RUINS OF THE SIAPOSH FORTRESS KA'A-KA

They hang like a gallery on the perpendicular precipice down to the rivers, and are provided with machicolations and loopholes for the raking of the river-bed—a thing it was impossible to do from the larger towers. Along the whole length of the wall, from tower to tower, there were, and still partly are, covered rooms for the defenders, and the whole slope on which the fortress is situate, both inside and outside, is laid out in terraces, which were most likely employed for growing corn, a fact of which there were still some traces left, so that the garrison in case of siege had a provision of corn. The irrigation was easily performed by leading in the water from the upper course of the rivers. The fortress is built entirely of flat pieces of slate cemented with mud; in several places in the walls, and on almost all the towers, the clay covering is still partly undamaged. In some of the towers the beamed ceilings, with their cover of flat stones and mud floors, are still in existence, but otherwise all the roof constructions have been removed. When we look at the finely polished towers, it is borne in upon us that the whole fortress must have had a very handsome appearance, and it seems almost incomprehensible that they were able to build such a mighty construction in defence of this poor mountain province, and still more incomprehensible that they were able to support a garrison large enough for its defence. It was clearly an enormous work. It must have taken several years to build such a fortress at a height of 600 metres above the Vakhan valley, on a mountain slope so difficult of access, even if the whole population of Vakhan had worked at it.

The fortress of Ka'a-Ka is situated about 1000 metres west of the kislak of Namatgut, on an isolated rock some forty metres high, near the Pandsh. Right opposite to it,

on the southern side of the river, is the pass road from the kislak of Istragh across the Hindu Kush to Chitral. The whole edge of this isolated rock is crowned by the mighty wall of the fortress, with loopholes in stories, in some places three stories, in others only two, strengthened here and there by square or conical flanking towers, ten metres high. In the middle of the circle of the outer wall, at the highest part of the rock, is the *réduit*, or main fortress, where Ka'a-Ka is said to have lived. The fortress has, with its walls and towers, a circumference of some 450 metres, and at its western part there are still ruins of a large square tower, which was most likely used as a watch-tower. The *réduit* is flanked towards east and west by walls with towers. These flanks were connected with the outer wall so that the fortress was divided into two parts. Its defence was undoubtedly based on attacks from the southern river bank in Vakhan, for there is still another wall to strengthen this frontage below the general outer wall near the river Pandsh. The ends of this wall were probably connected with the periphery of the proper outer wall, so that it formed a complete whole with the main fortress. There were thus three lines of defence towards the south—the lower wall by the river; the outer wall; and the *réduit* with its flanking walls —whilst towards the north there was only one line of defence—the outer wall.

The *réduit* is situate higher up, dominating the rest of the fortress, and between this and the outer wall is a deep valley round it, so that it would have been very difficult for an enemy to storm. The valley seems to have been made deeper by artificial means, and possibly the stones of the walls and towers were got therefrom. Through the valley, at the northern part of the fortress, was



GROUND PLAN OF THE SIAPOSH FORTRESS KA'A-KA AT NAMATGUT

A. Réduit. *B–B.* Old aqueduct

led a channel which provided it with water. As attacks were expected from the south, the channel is of course in the northern part of the fortress, for thus the fastness would still be supplied with water, even if the southern wall were taken by the enemy. This wall, having been won, the fight would be continued from the *réduit* and its flanks, which still formed an independent fortress owing to its communicating with the northern wall as well as with the southern one.

This Siaposh fortress, being built so near the Pandsh, and so evidently being based for defence not only against the Indian people as they crossed the pass of Istragh, but also against the Vakhans on the southern side of the river, seems to indicate that the Siaposh had only conquered the northern river bank in Vakhan. Whether similar Siaposh fortresses are found on the southern side of the Pandsh we could not personally discover; but the Vakhans denied the existence of any such. Perhaps the Siaposh occupation of Vakhan was only of short duration, the conquests of Ka'a-Ka possibly remaining under Siaposh sway only so long as Ka'a-Ka lived—a thing which is common in realms founded by an eminent commander.

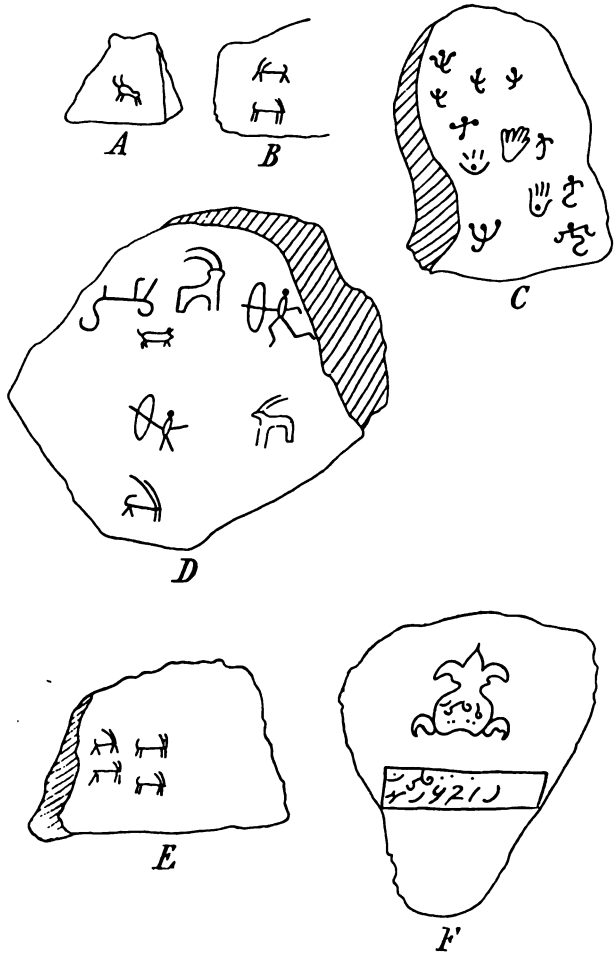
The fortress must have been exceedingly imposing in its original form. Several of its walls and towers still stand to a height of ten metres; they are all built on a solid stone foundation on which stand the walls of unbaked clay, being everywhere at least a metre thick. From the larger towers and the walls of the *réduit* they were able to shoot through three stories of loopholes; whilst, in the outer wall, there were only two stories of loopholes. Sloping brick descents, both in the *réduit* and below the outer wall, indicate the presence of underground passes from the

réduit to the outer wall, and from the outer wall to the wall at the banks of the Pandsh. In a few places ramparts are constructed for the passage from the inner walls to the outer ones, and along the outer wall there are remains of buildings which show that all along this wall there were covered rooms for the garrison.

On the middle of the smooth outer front there were ornamentations resembling a ribbon or border, made of small pyramidal figures stamped on the clay in rows, one above the other; and above this border were semicircular figures with rays from the centre to the periphery. If the few and simple remains of Siaposh art be compared to the art of any other people, it must be said to be most closely allied to that of the Parthians.

These Siaposh fortresses far surpass the fortresses of the Vakhans in size and in their solid and ingenious construction. The Vakhan fortresses are also very primitive, and generally only consist of a high square stone wall built on some mountain terrace very difficult of access. But the Siaposh fortresses also surpass those in the more fertile provinces of Darvas and Karategin, though these be situated nearer the centres of Asiatic culture; for, whilst in those provinces we still find some old fortresses in good repair and the ruins of others, yet, from a military point of view, they cannot be compared to the Siaposh fortresses in the Upper Pandsh valley; indeed, these are only surpassed by the largest old fortifications of Turkestan, Bokhara, and Khiva, and only in regard to size, not with respect to the ingenious employment of ground.

No articles were found in any of these fortresses which could remind one of their former defenders, but possibly excavations here might lead to the unearthing of things of interest.



GRANITE BLOCKS WITH CARVED FIGURES

A, *B*, *C*. Stones near Langarkish, 70, 80, and 150 centimetres high. *D*. Stone in the ravine east of Darshai, 150 centimetres high. *E*. Stone at Darband 100 centimetres high. *F*. Stone by the roadside between Hazreti Ali and Ka'a-Ka.

Other older remains which may possibly originate from the Siaposh, but about the origin of which we could learn nothing whatever from the Vakhans, were some stones of granite which we found in several places, and on which figures and signs were carved, which we carefully copied. Near the northern end of Langarkish, where a small tributary stream flows into the Pandsh, we found three such stones. On one is a figure which is a little difficult to determine, but is probably meant to represent a kiyik with the two backward-bent horns; on another were two distinctly carved kiyiks; and on the third were some strange signs resembling the figures on old Indian coins, and some hands. As has been said, the hand is constantly found in the flour drawings in the houses of Vakhan; moreover, it is found in the figure erected above the altar at the hot springs of Shund in Garan, and on a monumental stone with a Persian inscription which was brought from Shugnan to the National Museum at Copenhagen. It is also found as a wall decoration in the temples of the Parsee of the present day in Yezd in Persia; but whether it is connected with the Parsee faith or with the Siaposh sect cannot be determined—most probably, however, with the Siaposh.

A large block of granite, about a metre and a half high, which stood near the ravine, about 1000 metres east of Darshai, where there are the ruins of a Siaposh fortress, had, on its front side, which was smooth from the hand of nature, carved drawings representing a hunting of the kiyik with bows and arrows. On the top picture the figure furthest to the left probably represents a kiyik killed by the archer to the right, who is now aiming at the next kiyik. Below the upper design is carved the picture of a dog. As the Siaposh used bows and arrows, the

drawings are possibly meant to represent their hunting exploits.

Near the waterfall at Darband, formed by the Pandsh, south of Barshar, we found a granite stone about a metre high, on which were carved four kiyiks. As all these stones were of hard granite, the figures may be of considerable age; but whether they were carved by Vakhans or by the Siaposh it is very difficult to determine. Besides these stones we found one at a path between Hazreti Ali and Ka'a-Ka, on which there was a Tadjik inscription, and under the heart-shaped figure a carved frame in which there was writing in Shugnan (Tadjik): "Hussni-ia-ari marâ tamasha kuni"; "Nai babari marâ tamasha kuni"—which our interpreter translated: "A good wife and good children give a merry face"; "A man with a merry face speaks well."

CHAPTER XII

Religion and superstition.

IN several places in Vakhan and Ishkashim, as at Langarkish, Darshai, Nut, and Somdjen, there were some detached square towers without any entrance or opening in the walls; they were built of flat stones cemented with mud, and had a height of about six metres and a base of from four to six metres. Apparently without any purpose whatever, they stood on barren mountain terraces or in dark ravines amongst the mountains. Several of them were scarcely more than half a century old, and no ruins were found in their neighbourhood to indicate that they might have belonged to former fortresses, though this was what the Vakhans said they were built for, calling them Top-khanáh, Turkish for *gun-tower* or *arsenal;* but for such a purpose they were quite useless, as one could only get into them by creeping up a ladder and then sliding down into them. I am inclined to believe that these towers were possibly once *towers of silence*, where the natives placed their dead in accordance with the Parsee religion. No remains of bodies were found in the towers, but the natives, in spite of the Shiite faith which was forced upon them, may have clung to their original Zoroastrian religion and used these towers secretly. Possibly they have kept

them in repair, being of opinion that Islam was only a passing evil.

It was very difficult to learn anything about their old religion, as the province during the autumn of 1896 was surrendered to Bokhara, and the officials sent there on that occasion gave strict orders to everybody to pay homage to Islam—those that dared have another religion being subjected to corporal punishment. I am therefore certain that the natives who accompanied us, and, according to orders from Bokhara, were at our disposal, did all in their power not to betray customs connected with their old religion, and gave us evasive answers with regard to these towers, as they did about the sanctuary of Hazreti Ali.

With regard to the religion of the people, and more especially the religion of the Vakhan, I am inclined to believe that the Parsee religion held its own here up to the beginning of the nineteenth century ; and even if the Shiite faith were the official religion, it is the religion forced upon them by the Afghans, and is not favourably looked upon by the people. Probably no steps were taken either by the Afghans or from the province of Badakhshan, north of Afghanistan, under which sway Vakhan has lately been, to try to spread any culture through the poor valley of the Upper Pandsh.

When I passed through Vakhan in 1896 there was an interregnum, in which there was really no established government. The Afghans had been driven out, at any rate formally by diplomatic negotiations, by the Russians ; but the Russians had not yet occupied the province, so that the inhabitants really had no ruler. Being questioned by me with regard to their religion, they said that they were not Mussulmans, Shiites, nor Sunnites, and they had no

Mashits (mosques or houses of prayer) like the Mahometans of the northern valleys of Pamir. They asserted most pointedly that they did not say daily prayers ("nâmas") like the Mussulmans, but that they were only united with the direction of Providence through their altars with the holy lights and their sanctuaries. Though they all in 1898 professed to be Sunnites, on account of the orders of the Bokhara authorities, we learnt a great deal about their religious point of view through our Kasi, Khoda Dâ, whose statements seemed to confirm our estimate that their religion consists of partly corrupted remains handed down from the old Iranian faith.

Their chief god is called Allah, as in Islamitic religion, or Khodâ, but they also have one Almasdé, which is probably a corruption of Ormuzd (Ahura Mazda), who is not, as in the old Iranian faith, the creator of the world, but has here degenerated into an evil spirit, who lives in the rivers, into the eddies of which he tries to draw bathing or swimming men. Sometimes he will go into the stables at night and amuse himself by disturbing the horses and donkeys or by pulling hairs out of their tails and manes.

The whole world was created by Allah or Khodâ—the heavens in 45 days, the water in 60; the earth in 75; the trees in 30; the cattle in 80; and, at last, man in 75 days. This corresponds exactly with the time that Ahura Mazda took for the creation.

The world is made of fire, earth, water, and wind, and these four elements are given to man to make use of. The Mazdak sect of the old Iranian religion held that everything had developed itself out of fire, earth, and water, and to this later on was added wind.

The sky is of silver, and the stars of cut glass; each man

has his own star ("zöthroog"), and when a person dies a shooting star is seen. (In the Iranian faith the sky is of bright steel or silver, and both good and evil stars are found.) There are several skies, one above another—the uppermost sky ("asman") is of silver; and there Khodâ (God) lives. In the earth lives the devil ("Shaitan") with all his brood; but there is besides a kind of between-world, the air, which is full of spirits, whereof some seem to be quite useless for man, and the rest to be evil spirits. In the main features this is the old Iranian faith also. The spirits of the air are male and female, and it is one of the female spirits that tries to contract the throats of sleeping people and so produces snoring. Another rides on human beings and so produces nightmare. The natives told me that they often in their dreams at night saw these evil female spirits, who were a mixture of the beautiful and the dreadful.

In the old Iranian faith, the Avesta religion, (we give it this name for convenience sake, well knowing that the Avesta must be much younger than the religion whose doctrines it comprises), both good and bad spirits, whether male or female ("Yazatas"), which fill the air, have in time all become evil spirits.

The Vakhans hold that the evil spirits, which they imagine to fill the air, now and again visit the earth and take up their abode in dark ravines, amongst mystical-looking mountains and rocks, or in old trees, and by graves. It is possible that this is why they have lights burning in bowls or lamps in such places, to keep these evil spirits away by the aid of the good spirit, the fire—or at any rate to paralyse their effects.

The Vakhans, however, consider the spirits who produce thunder ("tundur") and lightning ("âtashak") as an

exception to the evil spirits of the air, for though they do not see any use in these things, they do not see that they do any harm. The Vakhans hold that thunder and lightning, which, by the way, are very rare here, are produced by the clouds drawing up water from the rivers, and as the spirits who rest on the clouds do not like the wetness, they beat the clouds, and thunder and lightning are the result. Others said that thunder was produced by the clouds fighting amongst themselves, and that the consequent storm was very injurious to the corn.

In the Avesta religion we find the lightning explained as a weapon against the demons, and the thunder to be the cry of the demons when they are hit by the lightning—an explanation which, in the main, resembles that of the Vakhans. Moreover, the Avesta religion states that the spirits of the air often suffer very much from the cold, just as the Vakhans say that they suffer from the moisture which the clouds draw up from the rivers.

As the Vakhans hold that the clouds fight amongst themselves, they must imagine them to be living beings, mighty spirits. The only thing that they attribute to them, however, is that the rain ("wûr") and the snow ("zumm") are made by them.

Many of the spirits which float in the air play a great part in the imagination of the natives, and must be regarded as hobgoblins who, by all kinds of ill-natured devices, tease men. The people, however, could give no explanation as to what they imagine them to be like, or of the purpose of their existence.

The people of the Pandsh valley imagine the rivers and lakes to be inhabited by beings who, if they be not real gods, are at least supernatural beings, like the water-gods

of the Avesta religion. The same superstition is found amongst the Kirghiz of High Pamir. In the rivers we have the evil spirit Almasdé, demon lord of the whirlpool ; and in the lakes especially we find hairy mermen immensely rich in gold and precious stones. Amongst other tales it was said of the Emir of Kabul, Abdurrahman Khan, that he had an interview with such a merman, to whom he sold his soul for gold and power.

The lakes are believed to be full of sea-horses, especially lake Shiva in Badakhshan and lake Yashilkul in High Pamir. During the night these sea-horses come out of the water to graze, and they then pair with the horses in the fields, and this crossing is said to be very good for the breed. To venture out on these lakes is death, as the sea-monsters would immediately pull one down into the deep.

It is interesting to compare this myth with the Vourukasha myth in the Avesta religion.

The people believe that there are great realms down in the earth, but no human being knows anything with regard to them, except that they are the abode of Shaitan and all his inferior devils. This Shaitan was in the beginning a good spirit, an angel, who lived in heaven. He was very wise and very haughty. One day in his arrogance he spat on the sky ("asman"), and this remained on the sky as a crescent. Then the angel Djabraïl (Gabriel)—in Islam God always speaks to the prophet through the angel Djabraïl or Gabriel—descended to the earth and formed a man out of earth, and God gave it soul and ordered that all the angels should bow down before this creature. (*See* second Sur in the Koran.) All the angels obeyed but Shaitan, who held himself too mighty an angel to bow down before man. As a punishment, Shaitan was chained on the sky to the half moon,

which he had himself produced in his arrogance. Later on he was thrown down on the earth and his body covered with hair. He took up his abode inside the earth, but is at the same time omnipresent on earth—nobody sees him or knows him.

In the Avesta faith opinions are divided as to how the devil ("Angro-mainyus") was created; but, amongst others, is the tradition that he is a fallen angel, and that seven demons were chained to the sky. This doctrine was held by the Zervanit sect.

The halo round the moon, which Shaitan produced by spitting on the sky (the allusion to the crescent being, of course, the moon in its first quarter), makes it become an evil star. In the Avesta faith good and evil stars are also found, and this is a strange fact, as all lights are considered by them the most effective adversaries of evil spirits.

The waxing and waning of the moon ("zjomak"), say this people, is due to its eating the stars until it becomes quite round, after which it vomits them again and becomes thin.

When there is a solar or lunar eclipse, the Vakhans kill sheep and goats at their altars and sanctuaries, and the meat is distributed among the poor. When, during winter, the sun can only shine a short while into the narrow mountain valleys, the people say that God ("Khodâ") is wrathful on account of the sins of the people—therefore the sun hides behind the mountains, and so, to appease God, they make sacrifices of cattle and light the lamps in the sanctuaries.

Others told us that the sun and moon occasionally themselves sin, and are punished by God by being obscured, as, for instance, after an eclipse; they then have very heavy toil in chasing away the demons who have obtained great power over them during the time of darkness.

The rainbow ("Kyamân-i-Rustam") is the bow of Rustam, or Rustem. Concerning this mythical hero, who, according to the Iranian legends, rode across Hara Berezaiti (The High Mountain, by which is meant Pamir, or, perhaps, the Elburz range) on his horse Alborj, they tell that he was a great prophet, who, at his death, left his bow in the sky.

Earthquakes, which are very frequent in these parts, are thus explained by the Vakhans: The earth rests on the horns of a gigantic ox; the ox ("dorukhs") stands on a fish; the fish rests on a sheet of water; and the water rests on the air. Now and again the ox is troubled by a fly or mosquito, and shakes its head, making the earth to quake.

Another story was told that the ox carried the earth on one horn, and when he got tired he shifted it on to the other horn, making the earth quake. (The ox was probably a holy animal even earlier than the time of the Avesta religion. The Persians attributed a sanctifying power to its urine, in spite of urine being considered polluting in the Avesta religion.)

Like the old Iranians, the inhabitants of the Upper Pandsh valley believe that all living creatures possess a soul ("djân"). They also believe in a life after death. When a man dies, an angel ("Azrâil") comes and tears the soul out of him, puts it in a small pot, and ascends with it to heaven, where he gives it to the angel Ishrâfil, who places it in a large trumpet. (This same tradition holds amongst the Arabs.) When once all living creatures on earth are dead, the angel will blow his trumpet, and all souls, both good and bad, will fly out to begin a new life. Meanwhile the souls lie dormant in the trumpet.

Thus, as in the Avesta faith, there is here a state of transition between life on earth and life after death, though explained in a somewhat different way. With respect to the

further development of the soul until the day of judgment, the Vakhans know nothing. The reception of the souls in heaven by the angel reminds one of the tenets of the Avesta faith, which teaches that Vohumanu, as the president for the Ameshaspentas, receives the souls in heaven, welcomes them, and shows them to their places. Like the Avesta people, the Vakhans have their monthly, their New Year's and their spring festivals, which consist of banquets and the lighting of the holy lamps.

The custom in Vakhan of ornamenting the pillars of the houses with wreaths of ears of corn, as soon as the corn ears, may possibly be a relic of the Anahita cult drawn from the Avesta religion. The Armenians used to celebrate every year a rose festival for the goddess Anahita, when the temples were adorned with wreaths. This custom still exists among the Christian Armenians, but is now celebrated in memory of the transfiguration of Christ.

The Parthians, who probably were of the Zoroastrian faith (not the form found in Zend Avesta, but a mixture of it and Magianism) have left behind them a bas-relief of a Magi consecrating a holy column adorned with wreaths ; and as the Parthian realm embraced Bactria to Parapamissos (Hindu Kush) it does not seem impossible that the custom should date so far back.

Thus we see that the religion of this people in many ways resembles the old Avesta faith, which, in the course of time, has been much corrupted by being handed down from generation to generation. The original old Iranian religion, which is written down in Zend Avesta, was already much corrupted at the time of the Achæmenides.

The fact that the Vakhans never blow out a light, so as not to pollute it with their breath, and that they never approach

a fire without covering their faces with their hands, must also be a remnant of fire and light worship.

The Ishans and the title of Saït (Descendant of the Prophet) are, of course, a part of the Shiite faith; but these things, together with the written prayers against disease, which the people buy from the wandering Dervishes and Calenders, have really no connection with their proper religion.

Of superstitions, the Vakhans have the ticking of the death-watch ("tik-tik-i-devâl") in a wall to prognosticate death for some one present in the room. To stride over a man who is lying on the ground is a very bad omen for the man over whom one walks. Everywhere in the sand a fish ("Mâhi Sakhankhu") is found. When this fish is boiled it becomes hard, like a stone. If one grinds one's knife on this stone and cuts meat with this knife, the men will be hearty and strong and the women beautiful.

CHAPTER XIII

How was the valley of the Upper Pandsh populated?

HOW the valley of the Pandsh became populated by Iranian tribes is a question that cannot be answered directly. The history of Central Asia is very difficult to trace, even on a large scale, as far back as the appearance of Islam; and of the period before Islam, even from what we gather from the centres of learning in Central Asia, by the Oxus and Jaxartes in Khiva, Bokhara, Turkestan, and Afghanistan, our knowledge is very small.

If we take it for granted that the main part of the population of Central Asia or Transoxania and Turkestan were Iranians at least as far back as we can go, and that these people had their principal residence in these more eastern parts rather than in the Persia of our day, this population has apparently sent its offshoots along the rivers into the mountainous regions, just as the water of a spring oozes down into all the clefts and crevices of the rocks.

From the fertile banks of Amu Darya's and of Syr Darya's lower course, the Iranian people wandered along the rivers into the narrowest valleys of Pamir and of the neighbouring mountains, where the majestic Hindu Kush partly stopped their further advance towards the south. No one can say for certain what caused the Iranians to leave the fertile parts

and go into these poor, distant mountainous regions. We can only conjecture. Even if these mountain valleys had formerly a more flourishing agriculture than now—indeed, they have of late suffered considerably from Afghan mismanagement and plundering—even if the masses of gravel and rocks and sand which the rivers and glaciers and snow-melting during the spring and the winds bring into the valleys, have done much to diminish the agriculture; and even if the Iranian myths are correct in calling the Pamir valleys a paradise and the cradle of humanity; yet they must have been from time immemorial narrow mountain valleys with scanty vegetation, and without any material resources which might have tempted the Iranians to a voluntary immigration.

The Arabian geographers knew Pamir and the Oxus with its five sources. Aristotle in 322 B.C. had likewise heard of these gigantic mountains. But Pamir is mentioned still earlier in the Iranian myths and in the Avesta. As the appearance of Zarathustra (Zoroaster) and the main details of the Avesta faith must date back as far as the time before the Achæmenidian dynasty, before the sixth century, B.C., or, as some think, 2000 years before Christ, it is probable that the Pandsh valley was populated at any rate before the time of Zoroaster. The Iranian myths from that time mention both the main rivers of Turkestan, Syr and Amu Darya, under the names of Rangha and Ardvi-sura; and relate that they came from Hara Berezaiti (The High Mountain), whereby Pamir and the neighbouring mountains were probably meant. Here is the cradle of mankind, the Airyana Vaeja, say the Iranian myths. This Eden was destroyed by God by means of snakes, snow, and sandstorms, when the wickedness of man grew great. Possibly the Iranian myths

make this statement because the valleys of Pamir were already inhabited by people who would not adopt the Zoroastrian faith, as we know that this religion met with great resistance in many places in Central Asia, amongst other places in the very country which is supposed to be the native place of Zoroaster—namely, Azerbeidjan, or Adarbaijan. There were several sects of the Zoroastrian faith who lived at strife amongst themselves. Zoroaster can only really be considered as a reviser of the old Iranian faith. Now it may be that one of these sects may, for religious reasons, have withdrawn into the valleys of Pamir to live its own life, or may have had to flee thither to live in seclusion from the world, and so in Vakhan have preserved their old faith right up to the middle of the nineteenth century, when the Shiite religion (which at the time of Wood's travels in 1837 was forced upon Shugnan and Roshan by the Islamitic rulers in Balkh, Khulm, Kundus and Faisabad) was proclaimed the official religion of Vakhan without really gaining any foothold upon the people. So that in 1896, when the Vakhans were without a ruler, they declared themselves not to be Mussulmans. Wood states the Shiite religion to be the official religion, without further comment; but in this way we could also state the religion of the Vakhans in 1896 to be the Sunna, as they were then, by the Sunnite Bokhara government officials, compelled to profess that creed without knowing in the least what Sunna and Shiah really meant.

It seems most likely that the southern valleys of Pamir were peopled from Balkh (Bactria), which played the same part for the Avesta people as Mecca for the Mahometans. From Balkh they went through the valleys of Kokcha and the Wardodjh river by way of Sebak and the pass of

Ishkashim, where was the easiest access, to south Pamir, to which region they brought the Iranian faith.

As to the way in which Shugnan became peopled, the legend in this province runs as follows: In Balkh there was a large realm governed by a mighty Khan. A terrible disease befell this Khan, so that two worms grew out of his shoulders, only their heads projecting, whilst their bodies remained in his body. To cure this disease and to get rid of the worms two holy men were called in, who advised him to feed the worms on human brains. This being done, the worms disappeared for a time, but returned again. A third holy man was now called in, who advised that the worms should be fed partly on dog's and partly on sheep's brains. The worms disappeared for ever. The two holy men who were first called in were now afraid they would be beheaded owing to their unsuccessful treatment, and fled into the mountains to Shugnan. The mountain Tadjiks are said to be the descendants of these two men.

It is said that Islam reached the borders of Pamir in the eighth century. Yet, according to the tradition, the Parsee faith remained in Shugnan until the thirteenth century, when the Shiite sect, which was formed between 714 and 874, succeeded the old Iranian religion.

It might be supposed that the Vakhans, in the narrow pass of Darband which formed the only entrance to Vakhan from the north and where, according to the legends, innumerable fights were fought, were able to stop the advancing Shiah, so that Islam was kept out of Vakhan for a longer period than from the northern provinces, which were, moreover, attacked by the Sunnites, who by the last Trater invasion into Badakshan spread themselves all over Darvas and the provinces further north.

During the journey of Marco Polo in South Pamir (1272 to 1273) the valleys were much troubled by the raids of the Siaposh, and it is most likely that after Marco Polo's time these raids led to the entire conquest of Vakhan, which they were forced to leave later on. It is impossible to discover exactly the duration of the Siaposh occupation of Vakhan; but as there are no remains of their domination north of Darband, it goes without further proof that they were checked in their northward advance by the Shiahs living north of Darband. The Siaposh occupation must have been of short duration; indeed the Vakhans only mention one Siaposh commander, Ka'a-Ka, and his two lieutenants, Zengi-bâr and Röndh, who built the large fortresses in Vakhan, whence they themselves were all driven by Hazreti Ali and his men, the Shiites. The Shiites of Shugnan and Roshan, who seem always to have been dependent on the larger westerly provinces of Badakhshan and the realms of the present Afghanic Turkestan (Balkh, &c.), went out eagerly to fight against the Siaposh in Vakhan, perhaps aided by the Vakhans themselves. To the most prominent man, Hazreti Ali, in memory of whom the altar Hazreti Ali was built beside the Siaposh fortress of Ka'a-Ka, the honour was then ascribed by the Shiites coming from the north of having driven the Siaposh out of Vakhan, and for this reason the Vakhans still honour this altar, as the Siaposh must have been a terrible scourge to them.

The people of quality in Vakhan, who have introduced the Shugnan language, were most likely some of Hazreti Ali's men, and they have naturally, as the new conquerors, kept their old religion (Shiah) as the official religion; but it has never gained any hold upon this old Iranian people,

though they had now got for masters a people of their own stock who had adopted Islam. Their supremacy has lasted right into our day, and princes, Mirs or Shahs, were chosen from the families of the highest rank in Vakhan and Garan, which, though partly independent, were in some part tributary states to the larger states west of the Pandsh in Afghanic Turkestan.

This quasi-independence of the small realms in the Pamir valleys was possible partly on account of their distance from the centres of culture in Asia, and partly on account of the incessant wars waged during the Islamitic period amongst all the peoples of Central Asia from Tian-shan and the lake of Aral, along Amu and Syr Darya, across the countries west of Pamir to India—which fierce disturbances would naturally divert attention from these small states; but about their history little is really known.

In the middle of the nineteenth century, the Mir Rahim reigned in Vakhan, who paid a yearly tribute of slaves to Khundus, but was in reality quite independent. Khundus was again tributary to the Emir of Kabul.

At about the same time, Shugnan was a realm under the Shah Yusuf Ali, whilst Garan was under the sway of the Khan of Faisabad. The realm of Shugnan embraced the valley of the Pandsh from Kalai Wamar to Khorok, and the valleys of the rivers Gund and Shakdarra ; the residence of the Shah was in the then still existing mountain fortress Kalai-bar-Pandsh (The Castle above the Pandsh). Shugnan was conquered by the Emir Abdurrahman Khan from Kabul, who died in 1901. He first conquered Badakhshan, where the Shah, Djâhândar Shah, was killed in 1867.

Terrified at this, Yusuf Ali Khan fled to Darvas, which was then under the sway of the Emir of Bokhara. The Afghans

occupied his residence, Kalai-bar-Pandsh, and sent him a letter to Darvas, assuring him that he might safely return. On his return to Shugnan he was taken to Kabul, where he was killed by Abdurrahman. Then the Afghans turned towards the south to Vakhan, whence the Regent Ali Mardhân Shah had already fled to Chitral, and the Emir of Kabul took possession of Vakhan and South Pamir as far as the neighbourhood of Yashilkul until 1893, when Russia formally took them over, though she took little notice of them until 1896, when they were given to Bokhara, under Russian protectorate.

CHAPTER XIV

History—List of literature referred to in these pages

To what extent the great historical events, such as the Greek invasion, the domination of the Parthians and Sassanides, the religious wars between the Parsee and the Buddhist, the victory of Islam over Parsee and Buddhism, the wars between the Islamitic sects, the Nigurian and Tartar and Mongolian invasions into the valleys of Amu and Syr Darya, have influenced these distant lands of Pamir it is impossible to determine.

Alexander the Great is known by all the peoples of Central Asia as Iskandár, and all the changing rulers of the valleys of Pamir professed themselves descendants of Iskandár. The Parthian and Sassanidian realms embraced Bactria and Arakhosia to Parapamissos, at all events to the borders of Pamir.

In the year 334 A.D. Christian congregations were found in the neighbouring Bactria. From 666 to 714 A.D. took place the invasion of the Arabs and the propagation of Islam in Transoxania. During the ninth and tenth centuries the Sassanides of Bokhara had their viceroys in Balkh. About the year 1000 the mighty Turkish prince Ilik Khan from Kashgar overran Turkestan and the Transoxanian countries. During the thirteenth century Jenghis Khan, with his Mongols, pushed on to Balkh and further on to India, to

which country he pursued the prince of Charezm Dshelal-ed-din. During the reign of the grandson of Jenghis Khan, Kublai Khan, Marco Polo passed Pamir on his travels. In the fourteenth century the Turkish prince Timur conquered Afghanistan. From 1500 to 1510 Sheibani Mehemed Khan was engaged in the conquest of Balk and Badakshan. In 1533 the greatest of the Sheibanides, Abdullah Khan, was born in Transoxania (Bokhara). In High and North Pamir are found several of the so-called Gumbas, or mud-chambered tombs, with a cubical lower part and a conical top, such as are built over the Kirghiz of high rank. Several of these, as at Yashilkul and the Alitshur river and other places, are called Abdullah Khan Mazar, and are said to have been built in commemoration of the famous Sheibanide, whose fame is widespread amongst all the Kirghiz. The Kirghiz tell that in all there were a thousand and one mazars consecrated to him. As we know from history, Abdullah Khan adorned Bokhara and several other towns with numbers of magnificent buildings, and one of his builders, being asked when Abdullah meant to be done with his building, answered: Not until he had finished his thousand and first splendid edifice. It is possibly this story that the Kirghiz tell in a different way.

In the seventeenth century the Ashtarkhanides in Transoxania fought with Abbas the Great for the possession of Balkh. These wars continued all through the eighteenth century, as the viceroys were constantly trying to form an independent realm there. In 1760 the Kirghiz are said to have advanced across Pamir to Badakhshan. Chinese ruins of fortresses were found by the second Danish Pamir Expedition in the year 1898 at Yashilkul.*

* Olufsen, Treatise in Geografisk Tidskrift, 15 B., H. 7 and 8.

From these general details of the sequence of political events in Central Asia we have to gather what little we can as to the culture and development of these small realms of Pamir, as to which history is silent.

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CHAPTER XV

THE ANTHROPOLOGY OF THE MOUNTAIN TADJIKS

By Sören Hansen

During the stay of the second Danish Pamir Expedition in the provinces of Shugnan and Vakhan, the botanist of the expedition, Mr. Paulsen, had the opportunity of making a series of anthropological examinations of the people, concerning whom, up till then, we had no positive details as to physique, build, and racial characteristics. It was taken for granted, of course, that there was a certain likeness to the rest of the mountain Tadjiks; but the mountains of Central Asia have already afforded many ethnographic surprises, and every positive contribution to our knowledge of the distinctive characteristics of the races of these parts is of great significance with regard to the origin and descent of the human races, even if it should not bring us the final solution.

The people of Shugnan and Vakhan must be regarded as Tadjiks, with distinctive peculiarities of race, and without any noteworthy intermixture of foreign elements, whilst the greater number of the Tadjiks in the lowlands west of Pamir are more or less strongly intermixed, especially with Turkish elements. In strong contrast to these Tadjiks of the lowlands, the type of the mountain Tadjiks is so pure that

we are able to form a very clear conception of that type through the brief descriptions handed down to us by former travellers, inasmuch as the type is identical to-day with the widely dispersed Celtic race of Europe. The fact that "the Celtic race" is a disputed definition is not sufficient cause to consign to oblivion this good and well-known name; but it must be distinctly understood that under this name I include all the peoples whose appearance corresponds with the Celtic type set up by Broca, their origin and mutual relationship being quite left out of the question.

MAN FROM VAKHAN (FULL-FACE)

It has even been supposed that this is the race mentioned in the descriptions of the Ussunes (Wu-sun) by the very ancient Chinese authors. These Ussunes were a people in these parts who had long "horse-like" faces, protruding noses, and deep-set, blue eyes. It is not improbable that the Ussunes were really mountain Tadjiks, though it is said that they spoke Turkish.*

The first perfectly trustworthy characteristic is, however, due to the French missionary Benedict Goès, who explored

* Kurakichi Shiratori, "Ueber den Wu-sun-Stamm in Centralasien." *Revue orientale*, iii., Budapest, 1902.

Pamir in the beginning of the seventeenth century, and states that the Mountain Tadjiks had fair hair and "beards like the Belgians." This direct comparison with a pure Celtic nation is of special interest because it originates from a period where any influence of scientific theories was out of the question. In accordance with this a much later explorer, the Englishman Wood, emphasises the fact that the Vakhans have no characteristic marks in their features or the colour of their hair and eyes, but at the same time he designates them Greeks (true or pseudo Greeks), and in this there is the sign that Wood was influenced by the current view of his time, according to which these tribes were descendants of the soldiers of Alexander the Great. Another English explorer of quite late years, Younghusband, seems to be somewhat influenced by their contrast to the Mongols when he terms the Mountain Tadjiks "very fair" with handsome regular features.* Indeed, the same evidence is given by Biddulph, Robert Shaw, and others, if not so markedly given; but all these observers

MAN FROM VAKHAN (PROFILE)

* Younghusband, "The Heart of a Continent," p. 173. London, 1896.

have found well-known features amongst the mountain Tadjiks, and, together with what we already know of the races of Central Asia, their short remarks about the general habits of the Mountain Tadjiks leave no doubt that they are quite in accordance with those of the Celtic race. The only difference is that their skin is "much tanned by sun and wind and all weathers,"* and in the fact that their eyes seem more deep set—perhaps for the same reason. Otherwise the affinity is as perfect as possible between the Mountain Tadjiks and the European peoples of the Celtic race as we find them in the south of Zealand.

These observations were, of course, founded on no scientific methods of the present day, but on merely the general impression left on the traveller.

For the scientific treatment we must go to Charles de Ujfalvy, to whom we chiefly owe our knowledge of the anthropology of the Mountain Tadjiks, as he has, through a thorough study of many years of the characteristics of the races of Central Asia, procured large and valuable material which throws a much clearer light over this subject. Ujfalvy's principal work is "Les Aryens au Nord et au Sud de l'Hindou Kouch," in which he has collected the contents of numerous large and small treatises.

Ujfalvy has had the opportunity, in repeated journeys, of studying part of the western groups of mountain Tadjiks; and, though he never met with either Shugnans or Vakhans, the measurements show that there is no difference worth mentioning, though they are far removed from the peoples Ujfalvy visited—his subject covering the country just east of Samarkand, and embracing in all some 58 specimens, whilst Paulsen examined 98. Ujfalvy had, moreover, an extensive

* Wood.

range for the purposes of comparison with almost all the surrounding tribes, and we therefore adopted his method in working out the material before us, though objections could be raised against it in more ways than one. That he is, on the whole, too apt to draw more extensive conclusions from his examinations than he is justified in doing, does not lessen the value of his positive information; but it must be emphasised that the numerous works of Ujfalvy can only be used under the most watchful criticism—a fact which is clearly laid bare when we go through the great number of notes and emendations at the end of his principal work. He attributes a greater significance to the newest, often very harzardous, theories than is their due; but he has a manifold and comprehensive knowledge of the subject, and the sharp eye for the inconsistencies between the physical and linguistic definition of race, which is so very necessary for the study of the ethnography of these peoples.

What has formerly so greatly impeded the study of the very intricate distinctions of race in Central Asia is the definition of the race-names, more especially the much-disputed term "Aryan." To Ujfalvy is due the honour of having settled that the term "Aryan race" is a mere linguistic definition which must neither be attached to the fair, short-skulled Celtic race to which the mountain Tadjiks belong, nor to the long-skulled Gothic-Teutonic race; but there is nothing to prevent its being used as a common designation for all the races which belong to the Aryan group of languages. There are certainly several prominent men of science who still retain the notion of a very ancient race, characterised by certain peculiarities of appearance, which has formed and propagated the original Aryan language and the Aryan culture, and, indeed, this may have been so, but

we know nothing of the appearance of this hypothetical race, and its language and culture has, at any rate, propagated itself to other races at so early a juncture that nothing is known about the original race.

The theories as to the origin of the Celts are too many

NATIVE OF SHUGNAN
(PROFILE)

NATIVE OF SHUGNAN
(FULL-FACE)

and too incompatible for us to undertake a closer account of them.

With regard to the mountain Tadjiks, it is only known that they had already, at least a couple of thousand years ago, found their way into the narrow and almost inaccessible valleys where they have since preserved their racial character, unaffected by the violent warfare which has raged again and again in their neighbourhood and strangely unaffected by all culture.

Their distribution cannot be stated with exactness, as they get lost towards the west amongst the chief mass of the

Tadjiks, and towards the east in the strongly mixed populations of Kashgaria, while towards the north they are separated from their allied races in Siberia by a broad belt of Turkish tribes, and towards the south of Hindu Kush their occurrence is extremely doubtful.

Robert Shaw, in a very intelligible way, has represented this by a diagram, in an article "On the Ghalchah Languages," in the *Journal of the Asiatic Society of Bengal*, xiv., 1876, page 140. He draws a line from north-west to south-east along the eastern border or ridge of hills of the Pamir plateau, and to the middle of this line another one from west to east along the Hindu Kush. Innermost in the acute angle thereby produced is then the home of the Mountain Tadjiks. But even if this be correct in the main, it must be remembered that Shaw's representation of the distribution of these tribes is founded exclusively on linguistic examination. But if, as we are now doing, we abide by the characteristics of their personal appearance, the boundary for their distribution must be moved considerably further towards the west. The tribes herein called Mountain Tadjiks to emphasise the difference between the anthropological and linguistic point of view, are ordinarily called *Ghalchahs*, a name which was used by Goès, but which is not even mentioned by a prominent judge of the ethnology of Central Asia like Bellew.* Paulsen has, in all, examined 98 or 97 individuals, whereof 36 or 37 were resident in Vakhan, 62 in Shugnan; they were all adult men, and the collected notes are thus under the same disadvantage as most of the examinations of primitive tribes—not even Ujfalvy was able to collect information about the women.

* "An Inquiry into the Ethnography of Afghanistan," p. 154. Woking 1891.

The stature of both tribes, taken conjointly, was, on the average, 168.6 centimetres, or almost exactly the same as the height of the population of Denmark. The tribes further towards the west, which were examined by Ujfalvy, were not quite so tall, only 166.7 centimetres; but this difference is of no importance when we consider the very small number of individuals measured. Nor were the Vakhans and Shugnans equally tall, for whilst the Vakhans had an average height of 166.8 centimetres, the Shugnans were taller by quite 2.8 centimetres, or almost an inch, and in the single individuals the heights varied from 154 to 182 centimetres.

——	Vakhan		Shugnan		Both Tribes	
		In all		In all		In all
Below 155 centimetres	1		1		2	
From 155 to 160 ,,	5	13	5	18	10	31
,, 160 ,, 165 ,,	7		12		19	
,, 165 ,, 170 ,,	14		14		28	
,, 170 ,, 175 ,,	4	22	20	44	24	66
,, 175 ,, 180 ,,	4		8		12	
180 cm. and upwards .	—		2		2	
Total	35		62		97	
Average	166.8 cm.		169.6 cm.		168.6 cm.	
Maximum	178.0 ,,		182.0 ,,		182.0 ,,	
Minimum	154.5 ,,		154.0 ,,		154.0 ,,	

According to the ordinary anthropological usage of language, the Mountain Tadjiks must be termed somewhat above the middle height, and, as may be seen from the above table of height classification, more than two-thirds of the individuals were 165 centimetres high, the limit ordinarily adopted for middle height. According to the examinations of Ujfalvy, the Tadjiks of the lowlands are a

little taller—on the average a little above 170 centimetres. Thus then the Mountain Tadjiks are comparatively tall when compared to the rest of the Celtic tribes, whose height is generally accepted as 164 centimetres; but we find similar deviations from standards and from the general rule in Europe also.

All travellers agree that in this people a sturdy and well-proportioned frame is combined with this considerable height; but we have no actual measurements in proof of this fact.

As regards the *shape and size of the head*, Paulsen's observations are very much in accord with the observations of Ujfalvy; and the deviations which the single measurements show are so slight that no importance can be attached to them.

The greatest length of the head is, in the Shugnans as well as in the Vakhans, exactly the same as in the western tribes; whilst the greatest breadth is three millimetres less. The difference is greatest in the curved measurements, the horizontal and transversal diameters of the head; but this may originate in the measurements being performed in different ways, and that this is the case seems to be manifest through comparison with Ujfalvy's measurements of the Tadjiks from the lowlands; in the latter the two diameters, the greatest length and the greatest breadth of the head, which were measured by the aid of caliper compasses, are almost exactly as large as in both groups of Mountain Tadjiks; whilst the two diameters of head measured with tape are in accordance with the measurements of Ujfalvy's Mountain Tadjiks, but not with those of Paulsen. We are, therefore, not justified in drawing the conclusion pointed by the measurements, which would seem otherwise natural,

that the western Mountain Tadjiks, with respect to the size of the head, are more closely connected with the Tadjiks of the lowlands than are the eastern Mountain Tadjiks. There is here, moreover, good reason to emphasise the slighter value of the curved measurements, because there is in this respect an accordance between the eastern Mountain Tadjiks and the Dardu tribe south of the Hindu Kush, which might be misunderstood or overstated if we do not remember that the measurements are performed by different investigators. It is, however, not without interest to notice that a difference with regard to the horizontal diameter can be proved between the Shugnans and the Vakhans, which seems to indicate that the Vakhans are really more closely connected with the Dardus than the Shugnans.

In forty-four Dardus, Ujfalvy found an average horizontal diameter of 530 millimetres, which is somewhat more than Paulsen found. In the Vakhans the horizontal diameter was 532 millimetres; whilst in the Shugnans, who live farther away, it was 543 millimetres. A similar transition cannot, however, be proved either with regard to the transversal diameter of the head, which was 316 millimetres in the Shugnans, 313 millimetres in the Vakhans, and 330 millimetres in the Dardus; nor with the linear dimensions, of which the length of the head was considerably larger and the breadth of the head considerably smaller in the Dardus than in either of the two groups of Mountain Tadjiks, while there was no difference in these respects between the Vakhans and the Shugnans. Under these circumstances, we have conclusive proof that the Dardu people belong anthropologically to quite a different race to the Mountain Tadjiks. The table below gives a survey of the most important dimensions of the head in the Vakhans

and Shugnans, and, according to Ujfalvy, in the Mountain Tadjiks of the west, the Tadjiks of the lowlands, and the Dardus:

	Mountain Tadjiks				
	Vakhans	Shugnans	Western Tribes	Lowland Tadjiks	Dardus
	mm.	mm.	mm.	mm.	mm.
Greatest length of head .	181	182	182	184	190
Greatest breadth of head	156	156	159	156	144
Greatest horizontal diameter of head . .	532	543	560	557	530
Greatest transversal diameter of head . .	313	316	347	350	330

The ratio between the greatest breadth and the greatest length of the head, the so-called *index of breadth*, was, in the Vakhans as in the Shugnans, as 86 to 100. They are thus markedly brachycephalous (*short skulled*); whilst the Dardus are strongly dolichocephalous (*long skulled*), with an *index of breadth* of about 74.

This characteristic of race, which has held its own as the most important of all, unaffected by all modern criticism, separates the Mountain Tadjiks in so effective a manner from the Dardus and all other Hindu tribes, that no linguistic affinity can conjoin them into one race; at the same time it unites the Mountain Tadjiks closely with the Tadjiks of the lowlands and with the other Celtic tribes. The Celtic race can be easily distinguished from the few other races which have a similarly high *index of breadth* by its physiognomical characteristics, by the colour of the skin, the nature and colour of the hair, and in so many different ways that it will always be easily distinguished; but its great *index of breadth* is the factor which, above everything

else, separates it from the other "Aryan" races, with which it has, in other ways, many points of resemblance.

In the western Mountain Tadjiks, Ujfalvy found an *index of breadth* of 85, whilst it was about 83 in the Tadjiks of the lowlands.

The great purity of race, which is remarkable in these tribes, will be most clearly seen from the table below of the distribution, according to *index of breadth*, of the individuals who were measured :

——	Vakhans	Shugnans	Both Tribes
Below 75.0 (dolichocephalous) . . .	1	—	1
From 75.0 to 77.7 (subdolichocephalous) .	—	3	3
,, 77.8 to 79.9 (mesocephalous) . . .	3	1	4
,, 80.0 to 83.2 (subbrachycephalous) .	4	14	18
,, 83.3 to 84.9 (brachycephalous) . .	6	10	16
,, 85.0 to 89.9 (hyperbrachycephalous) .	13	22	35
,, 90.0 upwards (ultrabrachycephalous) .	9	12	21
In all	36	62	98

	Vakhans	Shugnans	Both Tribes
Average . .	86.09	86.00	86.03
Maximum .	92.74	95.81	95.81
Minimum .	73.89	76.50	73.89

Only few of the Celtic tribes of Europe have such a broad form of the head as the Mountain Tadjiks; but in certain parts of France and Belgium especially do we find some with as high, or a still higher *index of breadth*. In the Norwegian short-skulled people it is scarcely above 83 on the average; and in Denmark the type is everywhere so mixed that the *index of breadth* probably does not attain this figure.

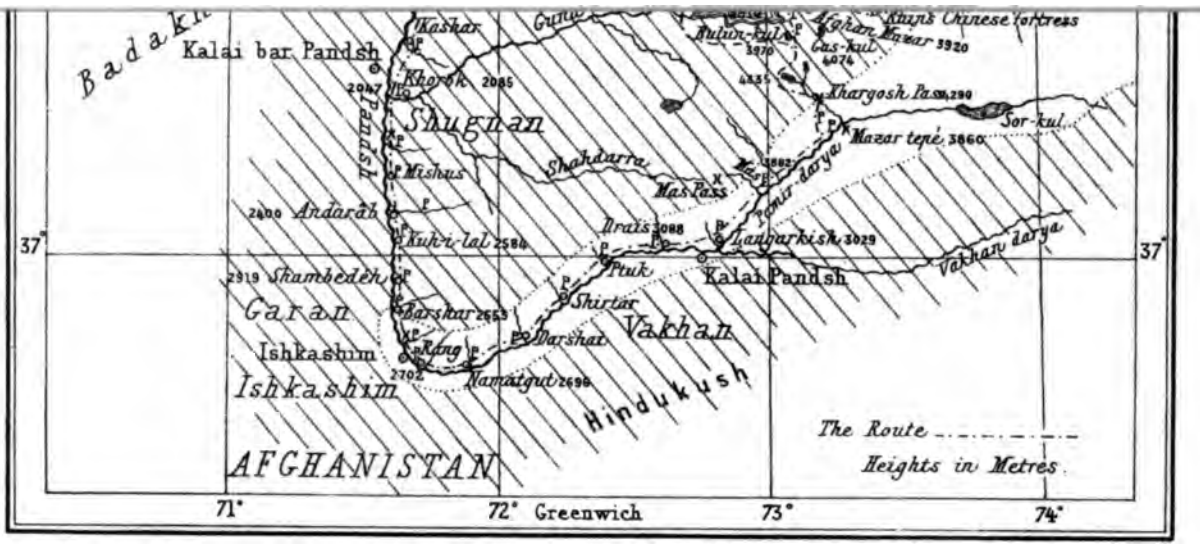
The numerous and excellent photographs brought home by the Danish Pamir Expedition give a good idea of the

general physiognomy of the Mountain Tadjiks; and they are of especial value as, until then, we have had no such material to work upon with regard to the western tribes. A Russian book of travels, recently published, contains some good portraits, in which we see this same type in a collection of representatives of the tribes from the eastern neighbourhood of Samarkand.*

The statements we have hitherto had with regard to the colour of the skin, of the hair, and of the eyes of the Mountain Tadjiks are doubtful, and more or less influenced by the contrast to the black-haired neighbouring tribes of Turkish, Mongolian and Hindoo race. It is undoubtedly this contrast which has made several of the travellers of former days term these tribes "fair," or even "very fair"; but it is pretty certain that they *are* generally much fairer than all the neighbouring tribes. As to the colour of their skin, it must be termed fair or white if it be understood that it is devoid of the yellow tinge which is found in all Mongolian tribes: and even when tanned by sun and weather it does not attain the peculiar dark tinge which characterises the Hindoos as well as all other Oriental races.

The hair is fine and wavy, generally not very dark; and the eyes are generally brown. Paulsen, however, finds blue eyes in three Vakhans, and grey eyes in one Vakhan; and in six Shugnans he notes greenish eyes. On the whole, the colour corresponds exactly with the colour of other Celtic tribes, with the same numerous shades that exist in such tribes.

* Lipsky's "Gornaya Bukhara," I. 1902. Izdanie Imp. Russkago Geograf. Obshchestva, Pl. I. and VI. St. Petersburg, 1902.


Badakh
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Pamir
Mishus
2400 Andarâb
Kuhn-lal 2584
2919 Shambedeh
Garan
Ishkashum
Ishkashim
Barshar 2653
Rang
2702
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Langarkish 3029
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Khan's Chinese fortress
Bulun-kul 3970
Gas-kul 4074
4335
Khargosh Pass 4290
Sor-kul
Mazar tepé 3660
3882
37°
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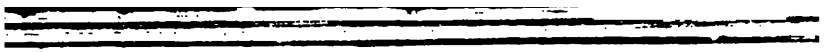
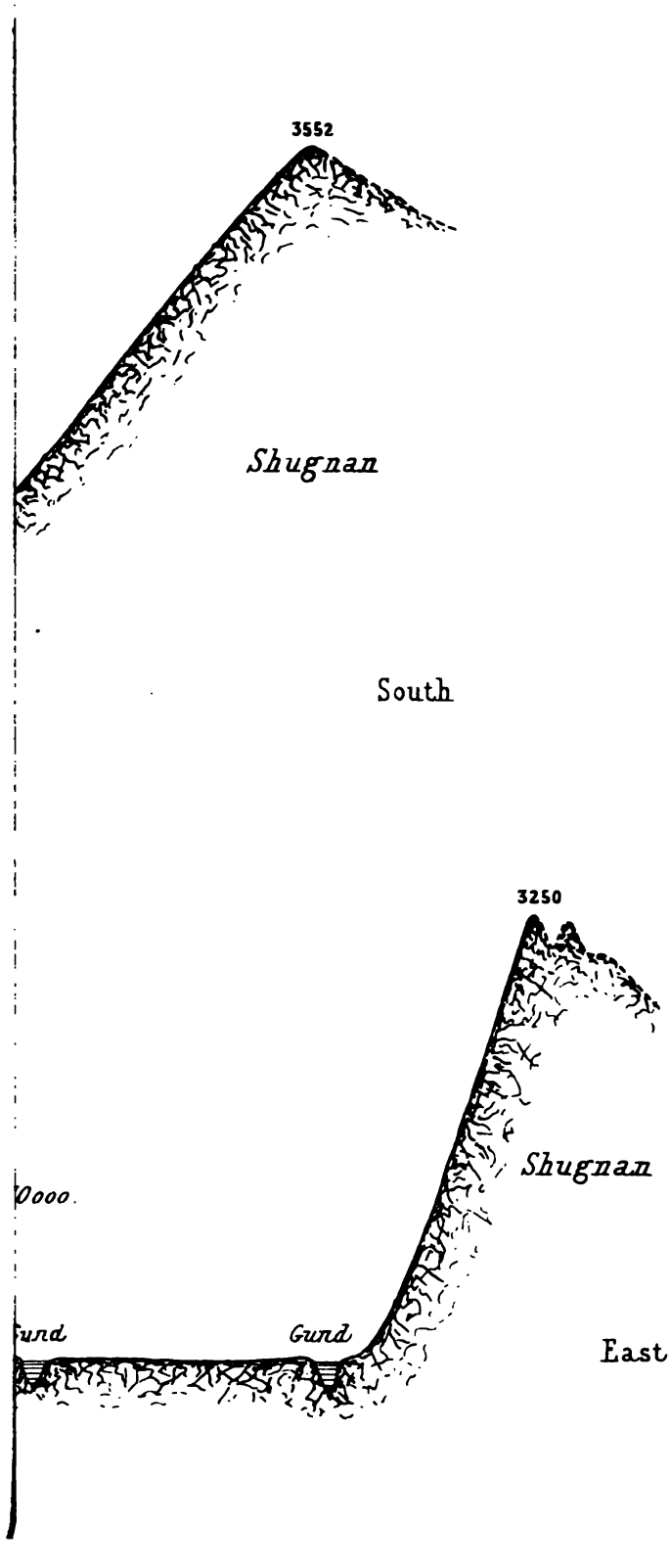
72° Greenwich
73°
74°
The Route
Heights in Metres
Much snow in winter
Almost no snow in winter

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Shugnan
South
3250
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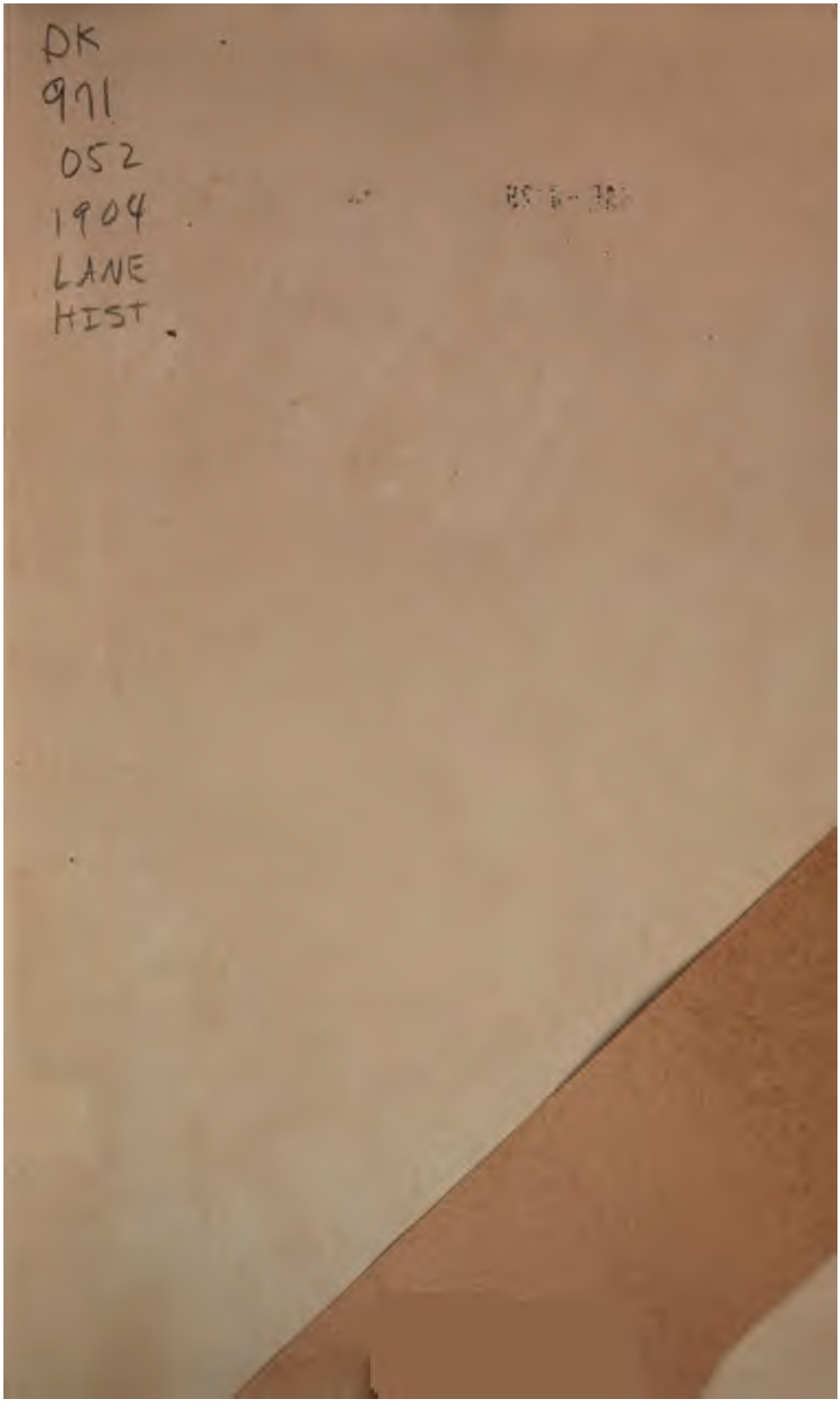
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